PATENT ABSTRACTS OF JAPAN

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(71)Applicant : TAKASAGO ELECTRIC IND CO LTD

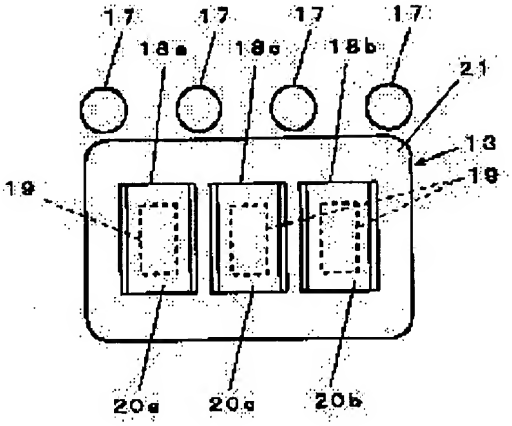
(72)Inventor : UEHATA KOSHIRO

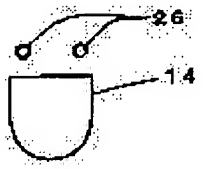
(54) SYMBOL VARIABLE DISPLAY GAME MACHINE

(57)Abstract:

PROBLEM TO BE SOLVED: To enhance the expectation for winning by attracting the interest of a player to the variable display actions of a symbol or stop actions of a variable display.

SOLUTION: Light sources 1, each of which effects surface light emission in accordance with a symbol stop point of each of symbol display windows 18a-18c, are arranged on the rear sides of reels 20a-20c, respectively. A control unit in a machine holds a lottery when a pachinko ball enters a start winning hole 14 and applies a flashlight onto any one of central, right, and left symbols by means of the light source 19 when a predetermined requirement is established. The identification display by the flashlight notifies beforehand a ready-for- winning state in response to a symbol displayed by the flashlight, while the left and right reels 20a, 20b are stopped. In such a case, the notification comes true at higher probability when a winning number is drawn in the lottery rather than the case in which a losing number is drawn.





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CLAIMS

[Claim(s)]
[Claim 1] After fluctuating two or more sorts of symbols and displaying, it has two or more symbol adjustable displays which have suspended said symbol fluctuation display, shift and display that symbol. In the symbol adjustable display game machine which determined by the lottery whether form the combination of a symbol which is winning a prize when the fluctuation display of all symbol adjustable displays is turned off An advance notice means to announce beforehand the appearance of the reach on which winning a prize may be materialized, and the mode of the reach, and the fluctuation display of each symbol adjustable display to a game person in the phase stopped except for at least one piece So that the reach of said mode announced beforehand and the reach of the mode besides an advance notice may appear in a predetermined probability, respectively It is the symbol adjustable display game machine which possesses the control means which controls halt actuation of a fluctuation display of each symbol adjustable display, carries out control in which the reach of the mode which said control means is a probability higher than the time of the lottery having separated when said lottery has hit, and was announced beforehand appears, and changes.
[Claim 2] Said advance notice means is the symbol adjustable display game machine indicated by claim 1 which announces beforehand that the reach to which the symbol is equal appears by giving a discernment indication of at least one in each symbol by which the deactivate indication is carried out before each symbol adjustable display starts a fluctuation display.
[Claim 3] the voice which made resume each fluctuation display and was eventually announced beforehand after it stopped each fluctuation display and said control means carried out the deactivate indication of the predetermined symbol to each symbol adjustable display except at least one piece, respectively -- the symbol adjustable display game machine indicated by claims 1 or 2 which change including a means stop each fluctuation display, to the timing to which the combination of reach [like] or symbols other than the reach appears.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] After this invention fluctuating two or more sorts of symbols and displaying it like a pachinko game machine or a slot machine, it suspends that symbol fluctuation display. The symbol adjustable display to which 1 or two or more symbol display positions are made to carry out the deactivate indication of one of the symbols It is related [whether the combination of a symbol which is winning a prize about the symbol adjustable display game machine which it had when the fluctuation display of all symbol adjustable displays is turned off especially is formed, and] with the symbol adjustable display game machine determined by the lottery.
[0002]
[Description of the Prior Art] A symbol display is prepared in the center section of the face of a board, start-up winning-a-prize opening is arranged under this symbol display, and, as for the conventional pachinko game machine, winning-a-prize opening is further arranged specially by that lower part, respectively.
[0003] Said symbol display arranges a symbol adjustable display [two or more (usually three pieces)] (only henceforth a "adjustable display"), and grows into the face of a board. The character representation machine which carries out the segment array of a viewing area, LED, etc. by which a scrolling indication of two or more sorts of symbols is given as these adjustable display on the image by the reel and liquid crystal display by which two or more sorts of symbols were expressed with the peripheral face, CRT, etc., and indicates a figure and the alpha character by fluctuation exists. According to the pachinko ball having gone into start-up winning-a-prize opening, it starts all at once, and after each adjustable display fluctuates two or more sorts of symbols at high speed and displays them, it suspends each fluctuation display in order of the left, the right, and a center, and displays one of symbols.
[0004] Moreover, in the above-mentioned pachinko game machine, if a pachinko ball goes into said start-up winning-a-prize opening, lottery processing is carried out inside an airframe, if this lottery is "a hit", the same symbol will stop to a symbol display window, for example, it will rank with it, and winning a prize will be materialized specially. This opening condition is held until special winning-a-prize opening in the condition of having always closed carries out open actuation according to formation of this special winning a prize, it carries out opening greatly and the pachinko ball of the predetermined number enters.

[0005] In addition, when a pachinko ball goes into start-up winning-a-prize opening during actuation of an adjustable display, the fixed number is memorized as the number of hold balls. In this case, whenever a pachinko ball goes into start-up winning-a-prize opening, after said lottery is carried out, that result is memorized and a previous symbol adjustable display action is completed, the symbol adjustable display action corresponding to the following hold ball is started, and the deactivate indication of the symbol according to said lottery result is carried out. In addition, the number of hold balls is told to each game person by burning of two or more hold lamps formed near the symbol adjustable display.
[0006] Since halt actuation of each adjustable indicator is controlled so that the combination of the symbol same as shown in "7", "7", and "7" is organized when the lottery has generally hit, when the fluctuation display of an adjustable display on either side is turned off and the same symbol is displayed, it will be in the condition before the winning-a-prize formation called "reach", each game person will have a hope, and halt actuation of a central adjustable indicator will be waited.
[0007] In the pachinko game machine in recent years, when it becomes "reach", while raising each game person's hope and agitation degree to winning a prize by performing halt actuation of the adjustable drop of the last center slowly, the mode of two or more sorts of halt according to a winning-a-prize probability was prepared, and the classification of reach is classified like "it is usually reach", "long reach", "super reach", and "special reach."
[0008] for example, in "it is usually reach", after turning off the symbol fluctuation display of an adjustable indicator on either side, it is less than one revolution and the symbol fluctuation display of a central adjustable indicator is suspended -- making -- the same -- "long reach" -- with "super reach", a central symbol fluctuation display is stopped after three or more revolutions by "special reach" after 2 - 3 revolution after 1 - 2 revolution, respectively. The symbol fluctuation display of this center is controlled so that a winning-a-prize probability becomes high, and the time amount of a fluctuation display becomes long, and the hope for formation of winning a prize of a game person comes to be raised, so that the symbol fluctuation display of the last after reach formation becomes long.
[0009]
[Problem(s) to be Solved by the Invention] However, by the above-mentioned approach, since the symbol fluctuation display until reach is materialized will be monotonous even if the die length of the period of a central symbol fluctuation display reports a winning-a-prize probability, a game person has the inclination not to take notice of a symbol fluctuation display until reach appears. Therefore, it is difficult to charm a game person's eyes from the event of the fluctuation display of a symbol being started to a fluctuation display, and to raise the hope for winning a prize.
[0010] This invention was made paying attention to the above-mentioned trouble, and charms a game person's interest in the fluctuation display action of a symbol, or halt actuation of that fluctuation display, and these actuation raises fully and certainly the hope for a game person's winning a prize, and it aims at offering the symbol adjustable display game machine which can moreover develop an interest **** game.
[0011]
[Means for Solving the Problem] After fluctuating two or more sorts of symbols and displaying in invention of claim 1, it has two or more symbol adjustable displays which have suspended said symbol fluctuation display, shift and display that symbol. Whether the combination of a symbol which is winning a prize when the fluctuation display of all symbol adjustable displays is turned off is formed An advance notice means to announce beforehand the appearance of the reach to which winning a prize may be materialized to a game person in the symbol adjustable display game machine determined by the lottery, and the mode of the reach, In the phase stopped except for at least one piece, the fluctuation display of each symbol adjustable display So that the reach of said mode announced beforehand and the reach of the mode besides an advance notice may appear in a predetermined probability, respectively He makes the control means which controls halt actuation of a fluctuation display of each symbol adjustable display provide, and is trying for the reach of the mode announced beforehand to appear in a probability higher than the time of the lottery having separated by the control means when said lottery has hit.
[0012] By giving a discernment indication of at least one in each symbol by which the deactivate indication is carried out in said advance notice means before each symbol adjustable display starts a fluctuation display, it constitutes from invention of claim 2 so that it may announce beforehand that the reach to which the symbol is equal appears.
[0013] In invention of claim 3, after making said control means suspend each fluctuation display and carrying out the deactivate indication of the

predetermined symbol to it to each symbol adjustable display except at least one piece, respectively, each fluctuation display is made to resume and a means to stop each fluctuation display to the timing to which the combination of the reach of the mode eventually announced beforehand or symbols other than the reach appears is included.

[0014]

[Function] According to invention of claim 1, a game person hopes for the appearance of the reach of the mode announced beforehand in response to advance notice that the reach of a predetermined mode appears, and comes to gaze at a halt of each fluctuation display. Moreover, when an advance notice comes true, a game person's hope is raised all the more, because winning a prize is materialized in a probability higher than the time of the reach besides an advance notice appearing when the reach announced beforehand appears.

[0015] Since according to invention of claim 2 the advance notice of reach is made before the fluctuation display of each adjustable display is started, a game person comes to gaze at the fluctuation display of each symbol with a hope from the event of a fluctuation display being started.

[0016] According to invention of claim 3, the combination of the reach of the mode announced beforehand when it re-changed and stopped eventually after an advance notice after the fluctuation display of the symbol of each adjustable display except at least one piece stopped, or symbols other than the reach appears.

[0017]

[Example] Drawing 1 shows the appearance of the pachinko game machine 1 which is one example of this invention. This pachinko game machine 1 equips the front face of an airframe with game board 1A, and is that thing of a configuration of that the great success lamps 8a and 8b were caudad formed for the pachinko ball charge pan 3, the actuation handle 4, the pachinko ball expenditure opening 5, a saucer 6, the surplus ball bleedoff opening 7, a loudspeaker 9, etc. in that upper part, respectively.

[0018] Said game board 1A is equipped with a glass door, and many failure nails (not shown), the winning-a-prize opening 10, the tulip accessory 11, etc. are arranged by the position in the face of a board 2, respectively. The symbol adjustable indicating equipment 13 is formed in the center section of the face of a board 2, under this symbol adjustable indicating equipment 13, the winning-a-prize opening 15 is formed in that lower part, and the out opening 16 is specially formed further for the start-up winning-a-prize opening 14 in that lower part, respectively. Moreover, the hold lamp [two or more (the example of a graphic display four pieces)] 17 is arranged in the upper part location of the symbol adjustable display 13.

[0019] In advance of a game, said pachinko ball charge pan 3 is a part which throws in two or more pachinko balls, and is open for free passage to taking-in opening of the pachinko ball which is not illustrated. The actuation handle 4 is for hammering out the pachinko ball which was made to drive the stroke section which is not illustrated and was incorporated from the aforementioned taking-in opening to up to the face of a board 2.

[0020] Said symbol adjustable display 13 is constituted by the front panel 21 attached on opening (not shown) of the face of a board 2, the reel unit (not shown) which is made to counter said front panel 21 and is arranged to the interior of an airframe. As shown in drawing 2 , three symbol display windows 18a, 18b, and 18c are formed, a front panel 21 is made to counter the formation location of each symbol display windows 18a, 18b, and 18c, and three reels 20a, 20b, and 20c of said reel unit are arranged in it.

[0021] The deactivate indication of the one symbol is carried out to the symbol display windows 18a, 18b, and 18c which correspond under the condition that the symbol according to several characters each of "0" - "9" to a peripheral surface is arranged, and the reel has suspended said reels 20a, 20b, and 20c, respectively. Furthermore, the symbol adjustable indicating equipment 13 of this example is made to correspond to the deactivate indication location of a symbol on the background of each reels 20a-20c, and the light source 19 which emits light in the shape of a field, respectively is arranged. These light sources 19 are the things of a configuration of having carried out array arrangement of two or more two or more LED24 on the matrix, respectively, and having carried out the mould of these substrates 23 and LED24 with the resin 25 containing a dispersing agent on the circuit board 23, as shown in drawing 3 .

[0022] In addition, in the light source 19 used actually, what LED24 is densely arranged far rather than a graphic display, and emits light in red, green, and each blue color light is adopted a predetermined number every. By making LED24 for every luminescent color emit light according to an individual by the control section 30 which carries out a postscript, back lighting by one color light of red, green, and blue is performed to the symbol in a symbol display window. Moreover, by blinking LED24 of one of the luminescent color, the flash plate used for the reach advance notice which carries out a postscript is realizable.

[0023] In addition, the symbol displayed on each symbol display windows 18a-18c may display not only one piece but two or more symbols. Moreover, although the fluctuation display of a symbol is realized in this example using the reels 20a-20c with which two or more sorts of symbols were expressed, it can replace with a reel and the thing of the shape of the shape of a disk or a belt etc. can also be used. Moreover, it may be made to indicate two or more sorts of symbols by the liquid crystal display, CRT, etc. by scrolling. In addition, the sign 26 in drawing 2 is an injury nail for regulating the drop direction of a pachinko ball.

[0024] If a pachinko ball goes into said start-up winning-a-prize opening 14, he is trying to determine whether align the combination of a symbol which performs the lottery by the random number and is winning a prize of each symbol display windows 18a, 18b, and 18c inside an airframe in this pachinko game machine 1. And after putting each reels 20a, 20b, and 20c into operation all at once after this lottery, it is made to stop in order of the left, the right, and a center.

[0025] If the lottery of this time above is "great success", halt actuation of each reels 20a-20c will be controlled so that the symbol of the same figure as each symbol display windows 18a-18c gathers. Subsequently, many pachinko balls are paid out by the pachinko charge pan 3 or the saucer 6 by said special winning-a-prize opening's 15 shifting to the special game mode which carries out count of predetermined open actuation, and putting many pachinko balls into winning-a-prize opening specially under this mode by formation of this winning a prize. In addition, when winning a prize to which not only this but a specific symbol (for example, "7") is equal is materialized, you may make it give a privilege higher than winning a prize by other symbols, although equivalent value is also given to winning a prize by which symbol of "0" - "9" in this example.

[0026] Moreover, in this example, also when said lottery becomes a "blank", the predetermined winning-a-prize probability is made to be shown by making the "reach" which the same symbol as each symbol display windows 18a and 18b on either side stops appear in a predetermined probability with the advent of reach. In case this reach is made to appear furthermore, before each reels 20a, 20b, and 20c start, he is trying to announce the appearance of reach beforehand to a game person.

[0027] Before each reels 20a-20c start, the advance notice of said reach specifically By blinking one symbol display windows 18a and 18b of the left, the right, and a center, and the light source 19 of the symbol by which the deactivate indication is carried out into 18c in back, and irradiating the flash plate of predetermined color at a symbol It suggests that the reach by that symbol appears (the flash plate used for this reach advance notice below is called "advance notice flash plate"). In addition, reach by this advance notice symbol is not necessarily made to not necessarily appear, and the combination of symbols other than the reach by the symbol besides an advance notice or reach may be made to appear in actual reel halt control. Moreover, the conventional reel control action which makes reach appear without an advance notice is also performed by the predetermined probability.

[0028] Although a postscript is carried out for details about the appearance probability of reach, when said lottery is becoming it a great success, it is set up so that the reach by the advance notice symbol may appear in a probability higher than the time of a lottery separating. Moreover, after making a reel on either side suspend and making the reach by the symbol besides an advance notice appear so that the hope for a game person's winning a prize may increase gradually, re-rotate each reel, and he makes after an appropriate time suspend each reel eventually, and is trying to make the reach by either the advance notice symbol or the symbol besides an advance notice appear in this example.

[0029] Drawing 4 shows the electric example of a configuration of the above-mentioned pachinko game machine 1. Among drawing, 30 are a control section which consists of microcomputers, make CPU31 the subject of control and an operation, and contain the program store section 33, the pattern storage section

34, the random-number lottery section 35, RAM36, etc.
[0030] The array pattern of a symbol with which the program for game activation was drawn on the pattern storage section 34 by each reels 20a, 20b, and 20c again is memorized by said program store section 33, respectively. Said random-number lottery section 35 contains the random-number-generation section which generates the random number for performing the lottery for determining the mode of the symbol display action by the lottery and each reels 20a-20c for determining said winning a prize, and performing various lotteries, and the lottery table for collating the incorporated random-number value.
[0031] said CPU31 -- a bus 32 -- minding -- two or more winning-a-prize ball detection sensors 40 and 40 ..., the start-up winning-a-prize ball detection sensor 41, the expenditure ball detection sensor 42, the ****** detection sensor 43, the ball expenditure device 44, the winning-a-prize opening drive 45, the reel actuation circuit 37, the lamp display circuit 38, the LED actuation circuit 39, etc. are connected.
[0032] Each winning-a-prize ball detection sensor 40 detects having gone into each winning-a-prize opening 10, winning-a-prize opening with which the start-up winning-a-prize ball detection sensor 41 is formed in the winning-a-prize opening 15 and the tulip accessory 11 at the start-up winning-a-prize opening 14, respectively, and a pachinko ball corresponds specially, or an accessory, and outputs an electrical signal.
[0033] The expenditure ball detection sensor 42 is formed in the expenditure path from the pachinko ball reservoir section inside an airframe (not shown) to said pachinko ball expenditure opening 5, detects the pachinko ball to pay out, and outputs an electrical signal. The ****** detection sensor 43 is formed in the ball path of game board 1A near the stroke section etc., detects the pachinko ball hammered out by the face of a board 2, and outputs an electrical signal.
[0034] The ball expenditure device 44 is for sending out a pachinko ball to the pachinko expenditure opening 5, and only a predetermined number emits the pachinko ball stored by the pachinko ball reservoir section described above by the command from CPU31 to an expenditure path. The winning-a-prize opening drive 45 is for controlling switching actions, such as said special winning-a-prize opening 15, the winning-a-prize opening 10, and the tulip accessory 11.
[0035] The reel actuation circuit 37 controls actuation of the stepping motor (not shown) for rotating and stopping each reels 20a-20c of the symbol adjustable display 13. Moreover, the lamp display circuit 38 controls burning actuation of the great success lamps 8a and 8b, the hold lamp 17, etc., and the LED actuation circuit 39 controls burning actuation of each LED24 which constitutes the above mentioned light source 19 for symbol lighting.
[0036] The above mentioned lottery for winning-a-prize decision is performed by incorporating the random-number value generated within the limits of "0" - "299", and on said lottery table, by assigning the random-number value of "30" as a great success random-number value for forming winning a prize, it is set up so that it may be "becoming it a great success" by 1/300 of probabilities. Moreover, each random-number value of "0" - "29" is assigned to the combination (this is called "blank reach" below) of a symbol which serves as a blank eventually although it becomes reach, and each random-number value of "31" - "40" is assigned to not making reach appear at the symbol combination of the blank accompanied by a dummy reach advance notice. And when one random-number value of remaining "41" - "259" is sampled, reach also serves as mere "blank" by which a dummy reach advance notice is not made, either.
[0037] Decision of forming the symbol combination which serves as winning a prize or blank reach by the above-mentioned lottery determines any of nine patterns PTN1-PTN9 of operation which perform still more nearly another lottery and are shown in following drawing 5 as a mode of reach the random-number lottery section 35 performs. In addition, when forming winning a prize is determined, the lottery according to individual determines further whether winning a prize by which symbol of "0" - "9" is formed, and if it makes it hit that the reach accompanied by an advance notice appears, the lottery for determining whether to perform the advance notice by what kind of mode is performed.
[0038] About the patterns PTN1-PTN11 (only henceforth "the patterns PTN1-PTN11 of operation") of a symbol fluctuation display action used in this example, drawing 5 matches the production mode of operation after that activity, the conditions as which each pattern is chosen by the lottery, the probability (this probability is called "great success reliability" below) for winning a prize to be eventually materialized with the advent of each pattern, and reach, respectively, and is shown.
[0039] It is the pattern of operation chosen in case the inside of drawing and the symbol combination which serves as reach as PTN1-PTN9 were described above are formed, and the reach by the symbol announced beforehand after performing a reach advance notice is made to appear by each pattern of PTN 1, 4, and 7. On the other hand, although a reach advance notice is performed, the reach by the symbol besides an advance notice is made to appear by each pattern of PTN 2, 5, and 8 of operation. After putting each reels 20a, 20b, and 20c into operation without an advance notice, he suspends the reels 20a and 20b on either side in order, and is trying to form the reach by the symbol of arbitration by each pattern of PTN 3, 6, and 9 of operation furthermore.
[0040] the reach by each patterns 1-PTN 9 of operation -- each -- voice predetermined to after reach formation -- voice which production (this is called "reach action" below) depended like is performed, and is different for every pattern group of PTN 1-3, PTN 4-6, and PTN 7-9 -- it is made to perform reach action [like].
[0041] In addition, as reach action, using the light source 19 described above, for example, the symbol of the right and left by which the deactivate indication was carried out, or the symbol of a center fluctuation on display can be illuminated, or actuation of rotating a central reel slowly can be considered. When adopting reach action by lighting, the illumination light of different color for every mode is used, or control of changing the luminescence time amount of LED is made. Moreover, when changing the roll control of a central reel for every mode, the time amount which rotates a reel is fluctuated between the modes like the conventional "long reach", "super reach", and "special reach."
[0042] A in drawing 5 and the B column are the random-number width of face (the number of random numbers) for choosing the pattern of operation applied to reach by the 2nd lottery described above, respectively, and the random-number width of face as which the B column is adopted in the random-number width of face as which the A column is adopted when said 1st lottery is great success when a lottery is a blank is shown, respectively. Moreover, the C column shows the great success reliability (%) given to each pattern of operation by setting out of these random-numbers width of face.
[0043] For example, the random-number value for choosing this pattern to being set up by the 1st pattern PTN1 as a random-number value for the random-number value of 30 pieces of the random-number values of "0" - "99" choosing this pattern at the time of great success at the time of a blank is only one piece. Therefore, the great success reliability P when this PTN1 appears becomes P= (30x1/300) / {(30x1/300) +30/300} =50%.
[0044] On the other hand, by the 2nd pattern PTN2, as a random-number value for choosing this pattern, the random-number value of ten pieces is set up at the time of great success, and the random-number value of two pieces is set up, respectively at the time of a blank. Therefore, the great success reliability P when this PTN2 appears becomes P=(10x1/300)/{(10x1/300)+(2x30/300)} =14.3%.
[0045] The same is said of the following patterns of operation. In this example While fluctuating random-number width of face among each patterns PTN [PTN1-] 9 of operation By shifting from the time of great success for every pattern, fluctuating random-number width of face with the time, and setting up When great success reliability becomes high rather than the time of reach without an advance notice appearing when the reach accompanied by an advance notice appears, and the reach by the symbol announced beforehand appears, he is trying for great success reliability to become high rather than the time of the reach by the symbol besides an advance notice appearing. Moreover, when the 1st mode appears between the modes of three kinds of above mentioned reach actions, great success reliability becomes high most, and subsequently to every mode, great success reliability is fluctuated like the 3rd mode to the 2nd mode and the next.
 [0046] In addition, the reach of the pattern of operation which carries out a dummy reach advance notice to the symbol combination from which PTN10 does not become reach, and PTN11 is [a dummy reach advance notice] also the pattern of operation which only serves as a blank nothing among drawing. Since it shifts and comes out and a certain thing becomes clear when these patterns of operation are performed, and a reel on either side stops, great success reliability becomes 0% at this event.
[0047] As mentioned above, the reach advance notice in this example chooses the symbol by which the deactivate indication is carried out by chance into the symbol display window just before each reels 20a-20c start as a symbol used as reach. When the symbol announced beforehand to them with reference to the array table of the symbol stored in the pattern storage section 34, carrying out counting of the driving signal from said reel actuation circuit 37 to a stepping motor to every reel 20a on either side and 20b is located in a symbol display window, CPU31 outputs the halt command of a driving signal to said reel actuation circuit 37, in order to form the reach by the symbol announced beforehand.

[0048] Moreover, when said reach advance notice is made, after making reel 20aa on either side and 20b stop and making the reach by the symbol besides an advance notice appear, each reels 20a and 20b are re-rotated, and he makes after an appropriate time suspend each reels 20a and 20b again, and is trying to show the reach by the symbol according to the selected pattern of operation in this example. Furthermore, about actuation of the advance notice flash plate at the time of said reach advance notice, and the reels 20a and 20b at the time of a re-revolution, two or more kinds of modes are set up, and it is made to perform by choosing one of modes by the lottery.

[0049] Drawing 6 shows the mode (henceforth an "advance notice mode of operation") concerning re-revolution actuation of the above-mentioned advance notice flash plate and a reel with the setups of the random-number width of face for choosing each mode. In this example, nine kinds of advance notice modes of operation M1-M3, R1-R3, and L1-L3 are set up about each pattern 1, 2, 4, 5, 7, and PTN 8 of operation which performs advance notice reach. While performing the location which performs an advance notice flash plate to any one symbol of a center, the right, and the left, in case Reels 20a and 20b are re-rotated, he is trying to rotate each reels 20a and 20b in one mode of the ******, slow revolution, and high-speed revolutions. Moreover, he sets up three kinds of advance notice actuation modes M0, R0, and L0, and is trying to set the location of an advance notice flash plate to a center, the right, or the left also about the control pattern PTN10 which performs a dummy reach advance notice.

[0050] Between the control pattern 1, 4, and PTN 7 which forms the reach by the symbol eventually announced beforehand in the example of a graphic display, and the control pattern 2, 5, and PTN 8 which forms the reach by the symbol besides an advance notice While fluctuating the width of face of the random-number value used for mode selection, it has set up by giving dispersion to the random-number width of face assigned to each advance notice mode of operation so that possibility that the reach by the symbol announced beforehand will be materialized may be changed by the advance notice mode of operation. That is, possibility that the reach by the symbol announced beforehand will appear becomes the highest, when an advance notice flash plate is given to central symbol display window 18c and each reels 20a and 20b on either side are ******(ed) at the time of a re-revolution. On the other hand, when an advance notice flash plate is given to left-hand side symbol display window 20a and the reels 20a and 20b at the time of a re-revolution carry out a high-speed revolution, possibility that the reach as an advance notice will be materialized becomes the lowest.

[0051] Drawing 7 and drawing 8 show the control flow of the pachinko game machine 1 by said control section 30. However, a graphic display and detailed explanation will be omitted [processing / an example and the pachinko game machine 1 / usual] here only about the control according to the pachinko ball having gone into the start-up winning-a-prize opening 14.

[0052] When a pachinko ball goes into the start-up winning-a-prize opening 14, to the winning-a-prize ball, drawing 7 shows a control flow at the time of determining the mode of the symbol display action by each reels 20a-20c by a series of above-mentioned lotteries, and is supervising whether the pachinko ball went into the start-up winning-a-prize opening 14 by ST1 of drawing 7 . If one of the above mentioned winning-a-prize ball detection sensors 40 is turned on, ST1 will serve as "YES." this -- responding -- CPU31 -- a winning-a-prize ball -- after incrementing the counter n for counting, the 1st lottery for winning-a-prize decision is performed to said winning-a-prize ball (STs 2 and 3).

[0053] When the random-number value of "30" is sampled by this lottery, it is "becoming it a great success", and CPU31 shifts to ST7 from ST4, a lottery with the independent above is performed, and the symbol aligned as a great success symbol is chosen from each symbols of "0" - "9." And it shifts to ST8 further, the lottery based on the random-number width of face of the A column of said drawing 5 is performed, and one pattern of PTN(s) 1-9 is chosen.

[0054] On the other hand, when the random-number value which is within the limits of "0" - "29" by ST3 is sampled, ST5 serves as "YES", it shifts to ST8, and one of patterns is chosen from PTN(s) 1-9 by the lottery based on the random-number width of face of the B column of drawing 5 . Moreover, "31 When ST6 is set to "YES", the pattern PTN10 which performs a dummy reach advance notice is chosen, when the random-number value which is within the limits of - "40" is sampled (ST11), and a larger random-number value than "40" is sampled, the pattern PTN11 of a blank is chosen (ST12)."

[0055] From M1-M3, R1-R3, and L1-L3, when one accompanied by a reach advance notice of the patterns 1, 2, 4, 5, 7, and PTN 8 of operation is furthermore chosen, ST9 serves as "YES", it shifts to ST10, the lottery based on the random-number width of face shown in said drawing 6 is performed, and one of advance notice modes of operation is chosen. Moreover, also when performing a dummy reach advance notice by ST11 is chosen, it shifts to ST10 and one of advance notice modes of operation is chosen from M0, R0, and L0. Then, CPU31 makes each selection result memorize in RAM36, and ends a series of processings. In addition, when Reels 20a-20c are rotating at this event, one hold lamp 17 is made turned on.

[0056] Drawing 8 shows a control flow over one winning-a-prize ball. This control routine is started by the interrupt signal under the condition which each reels 20a-20c are not rotating, it is confirmed first whether there is any winning-a-prize ball in ST21, and if this judgment is "YES", it will be confirmed whether a pattern of operation which performs a reach advance notice by following ST22 is chosen.

[0057] When the pattern of the either PTN 1, 2, 4, 5, 7, and 8 or PTN(s)10 of operation is chosen by each lottery of ST3 and ST8 of above mentioned drawing 7 , This ST22 serves as "YES". CPU31 After giving an advance notice flash plate to one symbol display windows 18c and 18b of a center, the right, and the left, and the symbol in 18a by following ST23 based on the selection result of ST10 of drawing 7 , each reels 20a-20c are started all at once. If predetermined time passes when patterns other than PTN10 which are furthermore a dummy reach advance notice are chosen, it will shift to ST27 from ST25, a sequential halt of the reels 20a and 20b on either side will be carried out, and the reach by the symbol besides said advance notice will be formed.

[0058] If predetermined time furthermore passes, CPU31 will shift to ST28 and will resume a revolution of the reels 20a and 20b on either side. that by which revolution actuation of the reel in this case is controlled based on the selection result of ST10 of said drawing 7 -- it is -- each reels 20a and 20b -- one voice of the ******, slow revolution, and high-speed revolutions -- it rotates more like, the reach by two or more sorts of symbols is fluctuated, and it is made to display

[0059] Then, although CPU31 stops again the reels 20a and 20b on either side and final reach is shown after predetermined time progress, when one control pattern of PTN(s) 1, 4, and 7 is chosen, reel halt control which the symbol announced beforehand suspends in symbol display window 18a on either side and 18b is performed (STs 29 and 30). On the other hand, when one control pattern of PTN(s) 2, 5, and 8 is chosen, halt actuation of each reel is controlled so that the reach by the symbol besides an advance notice is materialized (ST31).

[0060] On the other hand, when either of the control modes 3, 6, and PTN 9 which does not perform a reach advance notice is chosen, said ST22 and ST25 are served as to "NO", and ST26 serves as "YES." After CPU31 starts each reels 20a-20c without a reach advance notice in response to the judgment of ST22, it carries out a sequential halt of each reels 20a and 20b of the left and the right in response to the judgment of STs 25 and 26, and forms the reach by the symbol of arbitration (ST32).

[0061] Thus, when reach is materialized, it rotates central reel 20c, CPU31 performing reach action according to the selected mode of operation, and makes after an appropriate time stop this reel 20c to predetermined timing. In this case, if said 1st lottery is becoming it a great success, halt actuation of reel 20c will be controlled so that ST33 serves as "YES", it shifts to ST34 and the same symbol as the symbol of the right and left which constitute reach in central symbol display window 18c stops.

[0062] CPU31 restarts each reels 20a-20c, and it is made to rotate, when the symbol which furthermore aligned by this symbol halt differs from the great success symbol decided by ST7 of said drawing 7 until the great success symbol determined as each symbol display windows 18a-18c moves (STs 35 and 36). It shifts to ST37 after this, and the special game by which the winning-a-prize opening 15 is opened specially is performed.

[0063] In addition, when forming the symbol combination of blank reach, ST33 serves as "NO", it shifts to ST38, and CPU31 stops reel 20c to the timing as which a different symbol from a symbol on either side in central symbol display window 18c is displayed. Moreover, when [both] forming the symbol combination of a blank including a dummy reach advance notice, STs 25 and 26 serve as "NO", it shifts to ST39, and a symbol different, respectively stops each reels 20a-20c in order of the left, the right, and a center to the timing by which a deactivate indication is carried out.

[0064] In this way, after a series of control procedures are completed, it shifts to last ST40, the decrement of said number n of winning-a-prize balls is carried out, and the processing which receives one winning-a-prize ball to the start-up winning-a-prize opening 14 is ended.

[0065] Since according to the above-mentioned control a reach advance notice is performed before each reels 20a-20c start, a game person has a hope for

winning a prize from the start-up event of a reel, and comes to gaze at revolution actuation of each reels 20a-20c. Moreover, since great success reliability higher than the reach by the symbol besides an advance notice is given to the reach by the symbol announced beforehand, a game person holds a hope strong against a reach advance notice coming true, if the reach by the symbol further announced beforehand appears, will have much more hope to winning a prize, and will come to gaze at revolution actuation of central reel 20c.

[0066] Since each reels 20a and 20b are re-rotated and final reach is made to appear after an appropriate time according to the further above-mentioned control after making the reels 20a and 20b on either side suspend and making the reach by the symbol besides an advance notice appear When the reach eventually announced beforehand appears, an impression as if great success reliability went up to the game person with the re-revolution of a reel can be given. Moreover, since it is unknown, whether at the time of a re-revolution of a reel, a reach advance notice comes true can raise further the hope for the reach by the symbol the game person was warned to be by re-revolution of a reel.

[0067] further -- the voice of re-revolution actuation of this advance notice flash plate and reel -- even if it depends like, great success reliability is changed -- making -- moreover, the voice of reach action after reach formation -- since great success reliability is changed even if it depends like, whenever there are a revolution and a halt of a reel, a game person's hope can be raised, or an unexpected feeling can be given, and a game with interest can be developed.

[0068] In addition, although it is made to give an advance notice flash plate to the symbol in any one symbol display window, you may make it it shown in this example that an advance notice flash plate is given to the symbol not only in this but two symbol display windows or more, it may shift and the reach by that symbol indicate by the flash plate may be materialized. Moreover, the approach of an advance notice arranges LED in the sash of for example, not only a flash plate but a symbol display window, and may be made to perform lighting which surrounds the perimeter of a symbol. Moreover, when it replaces with a reel and a liquid crystal panel etc. constitutes an adjustable display, the color of the symbol for an advance notice may be changed, or it may be made to indicate the symbol for an advance notice by discernment using the specific character, a specific alphabetic character, etc. In addition, since a reach advance notice is made by indicating the symbol by which the deactivate indication is carried out by chance by discernment also when performing which embodiment, control concerning an advance notice becomes easy. Moreover, since what is necessary is just to establish the device for indicating the symbol by discernment also in respect of a hard configuration, an equipment configuration can be simplified.

[0069] Moreover, although he is trying to make it re-rotate in this example in the control mode which performs a reach advance notice after making each suspend a reel on either side A revolution of not only this but each reel is carried out only at a time, and you may make it form the reach by either the symbol announced beforehand or the symbol besides an advance notice. Moreover, the mode in which the target reach is made to appear, and the mode in which two steps of reaches are made to appear may be made intermingled, and you may make it appear in one revolution. Moreover, after making the reach by the symbol announced beforehand at the time of the first halt appear, in a culmination, the mode which makes the reach besides an advance notice appear may be set up by re-revolution of a reel.

[0070] It may not necessarily say that the reach of a different mode from the reach which appeared at the time of a previous temporary halt must be formed, and the same reach as the time of a temporary halt may be made to appear after a re-revolution of a reel furthermore. Moreover, at the time of a temporary halt, not reach but a symbol which is right and left different is stopped, the possibility of a "blank" is suggested to the game person, and you may make it form reach after a re-revolution of Reels 20a and 20b. Moreover, as described above, when the reach advance notice by two or more sorts of symbols is performed, control which fluctuates the reach according to the symbol besides an advance notice in making the reach by each symbol appear in order, and forming the reach by one of symbols eventually **** is also possible. In this case, if great success reliability different, respectively is given to the reach by each symbol for an advance notice, expecting formation of reach with more high reliability, a game person comes to pay much more attention by the fluctuation display of a symbol, and by the time a reel stops eventually, he can raise a game person's hope more than enough.

[0071] In addition, although the example which applied this invention was shown in the pachinko game machine made to suspend the fluctuation display of each symbol to the timing of arbitration here, it is possible to include this kind of function not only in this but in game machines, such as a slot machine which draws a predetermined symbol according to halt actuation of a game person, and is made to suspend a fluctuation display.

[0072]

[Effect of the Invention] Since it announces that the reach of a predetermined mode appears beforehand to a game person, the hope for a game person's winning a prize can be early raised to him, and he can be made to concentrate caution on a fluctuation display and its halt actuation of each adjustable display in invention of claim 1. moreover, the voice announced beforehand when the lottery for winning-a-prize decision had hit -- the voice besides an advance notice of reach [like] -- the voice announced beforehand since it controlled to appear in a probability higher than reach [like] -- formation of reach [like] can raise increasingly the hope for a game person's winning a prize.

[0073] In invention of claim 2, since it announces beforehand that the reach by the symbol appears by indicating the symbol by which the deactivate indication is carried out by discernment before the fluctuation display of each adjustable display is started, the hope for a game person's winning a prize can be raised from the event of a fluctuation display being started. And a game person can simplify the equipment configuration and control which can understand the content of an advance notice easily by the symbol by which it was indicated by discernment, and start an advance notice.

[0074] In invention of claim 3, after the fluctuation display of the symbol of each adjustable display except at least one piece stops after an advance notice, it re-changes. Since the combination of the reach announced beforehand or symbols other than the reach is made to appear when it stops eventually A game person's hope for the appearance of the reach announced beforehand can be gradually raised through the phase of initiation of a fluctuation display of a symbol, a stop, and a restart, and a game with interest can be developed.

[Translation done.]

OPERATION

[Function] According to invention of claim 1, a game person hopes for the appearance of the reach of the mode announced beforehand in response to advance notice that the reach of a predetermined mode appears, and comes to gaze at a halt of each fluctuation display. Moreover, when an advance notice comes true, a game person's hope is raised all the more, because winning a prize is materialized in a probability higher than the time of the reach besides an advance notice appearing when the reach announced beforehand appears.
[0015] Since according to invention of claim 2 the advance notice of reach is made before the fluctuation display of each adjustable display is started, a game person comes to gaze at the fluctuation display of each symbol with a hope from the event of a fluctuation display being started.
[0016] According to invention of claim 3, the combination of the reach of the mode announced beforehand when it re-changed and stopped eventually after an advance notice after the fluctuation display of the symbol of each adjustable display except at least one piece stopped, or symbols other than the reach appears.

[Translation done.]

EXAMPLE

[Example] Drawing 1 shows the appearance of the pachinko game machine 1 which is one example of this invention. This pachinko game machine 1 equips the front face of an airframe with game board 1A, and is that thing of a configuration of that the great success lamps 8a and 8b were caudad formed for the pachinko ball charge pan 3, the actuation handle 4, the pachinko ball expenditure opening 5, a saucer 6, the surplus ball bleedoff opening 7, a loudspeaker 9, etc. in that upper part, respectively.

[0018] Said game board 1A is equipped with a glass door, and many failure nails (not shown), the winning-a-prize opening 10, the tulip accessory 11, etc. are arranged by the position in the face of a board 2, respectively. The symbol adjustable indicating equipment 13 is formed in the center section of the face of a board 2, under this symbol adjustable indicating equipment 13, the winning-a-prize opening 15 is formed in that lower part, and the out opening 16 is specially formed further for the start-up winning-a-prize opening 14 in that lower part, respectively. Moreover, the hold lamp [two or more (the example of a graphic display four pieces)] 17 is arranged in the upper part location of the symbol adjustable display 13.

[0019] In advance of a game, said pachinko ball charge pan 3 is a part which throws in two or more pachinko balls, and is open for free passage to taking-in opening of the pachinko ball which is not illustrated. The actuation handle 4 is for hammering out the pachinko ball which was made to drive the stroke section which is not illustrated and was incorporated from the aforementioned taking-in opening to up to the face of a board 2.

[0020] Said symbol adjustable display 13 is constituted by the front panel 21 attached on opening (not shown) of the face of a board 2, the reel unit (not shown) which is made to counter said front panel 21 and is arranged to the interior of an airframe. As shown in drawing 2 , three symbol display windows 18a, 18b, and 18c are formed, a front panel 21 is made to counter the formation location of each symbol display windows 18a, 18b, and 18c, and three reels 20a, 20b, and 20c of said reel unit are arranged in it.

[0021] The deactivate indication of the one symbol is carried out to the symbol display windows 18a, 18b, and 18c which correspond under the condition that the symbol according to several characters each of "0" - "9" to a peripheral surface is arranged, and the reel has suspended said reels 20a, 20b, and 20c, respectively. Furthermore, the symbol adjustable indicating equipment 13 of this example is made to correspond to the deactivate indication location of a symbol on the background of each reels 20a-20c, and the light source 19 which emits light in the shape of a field, respectively is arranged. These light sources 19 are the things of a configuration of having carried out array arrangement of two or more two or more LED24 on the matrix, respectively, and having carried out the mould of these substrates 23 and LED24 with the resin 25 containing a dispersing agent on the circuit board 23, as shown in drawing 3 .

[0022] In addition, in the light source 19 used actually, what LED24 is densely arranged far rather than a graphic display, and emits light in red, green, and each blue color light is adopted a predetermined number every. By making LED24 for every luminescent color emit light according to an individual by the control section 30 which carries out a postscript, back lighting by one color light of red, green, and blue is performed to the symbol in a symbol display window. Moreover, by blinking LED24 of one of the luminescent color, the flash plate used for the reach advance notice which carries out a postscript is realizable.

[0023] In addition, the symbol displayed on each symbol display windows 18a-18c may display not only one piece but two or more symbols. Moreover, although the fluctuation display of a symbol is realized in this example using the reels 20a-20c with which two or more sorts of symbols were expressed, it can replace with a reel and the thing of the shape of the shape of a disk or a belt etc. can also be used. Moreover, it may be made to indicate two or more sorts of symbols by the liquid crystal display, CRT, etc. by scrolling. In addition, the sign 26 in drawing 2 is an injury nail for regulating the drop direction of a pachinko ball.

[0024] If a pachinko ball goes into said start-up winning-a-prize opening 14, he is trying to determine whether align the combination of a symbol which performs the lottery by the random number and is winning a prize of each symbol display windows 18a, 18b, and 18c inside an airframe in this pachinko game machine 1. And after putting each reels 20a, 20b, and 20c into operation all at once after this lottery, it is made to stop in order of the left, the right, and a center.

[0025] If the lottery of this time above is "great success", halt actuation of each reels 20a-20c will be controlled so that the symbol of the same figure as each symbol display windows 18a-18c gathers. Subsequently, many pachinko balls are paid out by the pachinko charge pan 3 or the saucer 6 by said special winning-a-prize opening's 15 shifting to the special game mode which carries out count of predetermined open actuation, and putting many pachinko balls into winning-a-prize opening specially under this mode by formation of this winning a prize. In addition, when winning a prize to which not only this but a specific symbol (for example, "7") is equal is materialized, you may make it give a privilege higher than winning a prize by other symbols, although equivalent value is also given to winning a prize by which symbol of "0" - "9" in this example.

[0026] Moreover, in this example, also when said lottery becomes a "blank", the predetermined winning-a-prize probability is made to be shown by making the "reach" which the same symbol as each symbol display windows 18a and 18b on either side stops appear in a predetermined probability with the advent of reach. In case this reach is made to appear furthermore, before each reels 20a, 20b, and 20c start, he is trying to announce the appearance of reach beforehand to a game person.

[0027] Before each reels 20a-20c start, the advance notice of said reach specifically By blinking one symbol display windows 18a and 18b of the left, the right, and a center, and the light source 19 of the symbol by which the deactivate indication is carried out into 18c in back, and irradiating the flash plate of predetermined color at a symbol It suggests that the reach by that symbol appears (the flash plate used for this reach advance notice below is called "advance notice flash plate"). In addition, reach by this advance notice symbol is not necessarily made to not necessarily appear, and the combination of symbols other than the reach by the symbol besides an advance notice or reach may be made to appear in actual reel halt control. Moreover, the conventional reel control action which makes reach appear without an advance notice is also performed by the predetermined probability.

[0028] Although a postscript is carried out for details about the appearance probability of reach, when said lottery is becoming it a great success, it is set up so that the reach by the advance notice symbol may appear in a probability higher than the time of a lottery separating. Moreover, after making a reel on either side suspend and making the reach by the symbol besides an advance notice appear so that the hope for a game person's winning a prize may increase gradually, re-rotate each reel, and he makes after an appropriate time suspend each reel eventually, and is trying to make the reach by either the advance notice symbol or the symbol besides an advance notice appear in this example.

[0029] Drawing 4 shows the electric example of a configuration of the above-mentioned pachinko game machine 1. Among drawing, 30 are a control section which consists of microcomputers, make CPU31 the subject of control and an operation, and contain the program store section 33, the pattern storage section 34, the random-number lottery section 35, RAM36, etc.

[0030] The array pattern of a symbol with which the program for game activation was drawn on the pattern storage section 34 by each reels 20a, 20b, and 20c again is memorized by said program store section 33, respectively. Said random-number lottery section 35 contains the random-number-generation section which generates the random number for performing the lottery for determining the mode of the symbol display action by the lottery and each reels 20a-20c for determining said winning a prize, and performing various lotteries, and the lottery table for collating the incorporated random-number value.
[0031] said CPU31 -- a bus 32 -- minding -- two or more winning-a-prize ball detection sensors 40 and 40 ..., the start-up winning-a-prize ball detection sensor 41, the expenditure ball detection sensor 42, the ****** detection sensor 43, the ball expenditure device 44, the winning-a-prize opening drive 45, the reel actuation circuit 37, the lamp display circuit 38, the LED actuation circuit 39, etc. are connected.
[0032] Each winning-a-prize ball detection sensor 40 detects having gone into each winning-a-prize opening 10, winning-a-prize opening with which the start-up winning-a-prize ball detection sensor 41 is formed in the winning-a-prize opening 15 and the tulip accessory 11 at the start-up winning-a-prize opening 14, respectively, and a pachinko ball corresponds specially, or an accessory, and outputs an electrical signal.
[0033] The expenditure ball detection sensor 42 is formed in the expenditure path from the pachinko ball reservoir section inside an airframe (not shown) to said pachinko ball expenditure opening 5, detects the pachinko ball to pay out, and outputs an electrical signal. The ****** detection sensor 43 is formed in the ball path of game board 1A near the stroke section etc., detects the pachinko ball hammered out by the face of a board 2, and outputs an electrical signal.
[0034] The ball expenditure device 44 is for sending out a pachinko ball to the pachinko expenditure opening 5, and only a predetermined number emits the pachinko ball stored by the pachinko ball reservoir section described above by the command from CPU31 to an expenditure path. The winning-a-prize opening drive 45 is for controlling switching actions, such as said special winning-a-prize opening 15, the winning-a-prize opening 10, and the tulip accessory 11.
[0035] The reel actuation circuit 37 controls actuation of the stepping motor (not shown) for rotating and stopping each reels 20a-20c of the symbol adjustable display 13. Moreover, the lamp display circuit 38 controls burning actuation of the great success lamps 8a and 8b, the hold lamp 17, etc., and the LED actuation circuit 39 controls burning actuation of each LED24 which constitutes the above mentioned light source 19 for symbol lighting.
[0036] The above mentioned lottery for winning-a-prize decision is performed by incorporating the random-number value generated within the limits of "0" - "299", and on said lottery table, by assigning the random-number value of "30" as a great success random-number value for forming winning a prize, it is set up so that it may be "becoming it a great success" by 1/300 of probabilities. Moreover, each random-number value of "0" - "29" is assigned to the combination (this is called "blank reach" below) of a symbol which serves as a blank eventually although it becomes reach, and each random-number value of "31" - "40" is assigned to not making reach appear at the symbol combination of the blank accompanied by a dummy reach advance notice. And when one random-number value of remaining "41" - "259" is sampled, reach also serves as mere "blank" by which a dummy reach advance notice is not made, either.
[0037] Decision of forming the symbol combination which serves as winning a prize or blank reach by the above-mentioned lottery determines any of nine patterns PTN1-PTN9 of operation which perform still more nearly another lottery and are shown in following drawing 5 as a mode of reach the random-number lottery section 35 performs. In addition, when forming winning a prize is determined, the lottery according to individual determines further whether winning a prize by which symbol of "0" - "9" is formed, and if it makes it hit that the reach accompanied by an advance notice appears, the lottery for determining whether to perform the advance notice by what kind of mode is performed.
[0038] About the patterns PTN1-PTN11 (only henceforth "the patterns PTN1-PTN11 of operation") of a symbol fluctuation display action used in this example, drawing 5 matches the production mode of operation after that activity, the conditions as which each pattern is chosen by the lottery, the probability (this probability is called "great success reliability" below) for winning a prize to be eventually materialized with the advent of each pattern, and reach, respectively, and is shown.
[0039] It is the pattern of operation chosen in case the inside of drawing and the symbol combination which serves as reach as PTN1-PTN9 were described above are formed, and the reach by the symbol announced beforehand after performing a reach advance notice is made to appear by each pattern of PTN 1, 4, and 7. On the other hand, although a reach advance notice is performed, the reach by the symbol besides an advance notice is made to appear by each pattern of PTN 2, 5, and 8 of operation. After putting each reels 20a, 20b, and 20c into operation without an advance notice, he suspends the reels 20a and 20b on either side in order, and is trying to form the reach by the symbol of arbitration by each pattern of PTN 3, 6, and 9 of operation furthermore.
[0040] the reach by each patterns 1-PTN 9 of operation -- each -- voice predetermined to after reach formation -- voice which production (this is called "reach action" below) depended like is performed, and is different for every pattern group of PTN 1-3, PTN 4-6, and PTN 7-9 -- it is made to perform reach action [like].
[0041] In addition, as reach action, using the light source 19 described above, for example, the symbol of the right and left by which the deactivate indication was carried out, or the symbol of a center fluctuation on display can be illuminated, or actuation of rotating a central reel slowly can be considered. When adopting reach action by lighting, the illumination light of different color for every mode is used, or control of changing the luminescence time amount of LED is made. Moreover, when changing the roll control of a central reel for every mode, the time amount which rotates a reel is fluctuated between the modes like the conventional "long reach", "super reach", and "special reach."
[0042] A in drawing 5 and the B column are the random-number width of face (the number of random numbers) for choosing the pattern of operation applied to reach by the 2nd lottery described above, respectively, and the random-number width of face as which the B column is adopted in the random-number width of face as which the A column is adopted when said 1st lottery is great success when a lottery is a blank is shown, respectively. Moreover, the C column shows the great success reliability (%) given to each pattern of operation by setting out of these random-numbers width of face.
[0043] For example, the random-number value for choosing this pattern to being set up by the 1st pattern PTN1 as a random-number value for the random-number value of 30 pieces of the random-number values of "0" - "99" choosing this pattern at the time of great success at the time of a blank is only one piece. Therefore, the great success reliability P when this PTN1 appears becomes P= (30x1/300) / {(30x1/300) +30/300} =50%.
[0044] On the other hand, by the 2nd pattern PTN2, as a random-number value for choosing this pattern, the random-number value of ten pieces is set up at the time of great success, and the random-number value of two pieces is set up, respectively at the time of a blank. Therefore, the great success reliability P when this PTN2 appears becomes P=(10x1/300)/{(10x1/300)+(2x30/300)} =14.3%.
[0045] The same is said of the following patterns of operation. In this example While fluctuating random-number width of face among each patterns PTN [PTN1-] 9 of operation By shifting from the time of great success for every pattern, fluctuating random-number width of face with the time, and setting up When great success reliability becomes high rather than the time of reach without an advance notice appearing when the reach accompanied by an advance notice appears, and the reach by the symbol announced beforehand appears, he is trying for great success reliability to become high rather than the time of the reach by the symbol besides an advance notice appearing. Moreover, when the 1st mode appears between the modes of three kinds of above mentioned reach actions, great success reliability becomes high most, and subsequently to every mode, great success reliability is fluctuated like the 3rd mode to the 2nd mode and the next.
[0046] In addition, the reach of the pattern of operation which carries out a dummy reach advance notice to the symbol combination from which PTN10 does not become reach, and PTN11 is [a dummy reach advance notice] also the pattern of operation which only serves as a blank nothing among drawing. Since it shifts and comes out and a certain thing becomes clear when these patterns of operation are performed, and a reel on either side stops, great success reliability becomes 0% at this event.
[0047] As mentioned above, the reach advance notice in this example chooses the symbol by which the deactivate indication is carried out by chance into the symbol display window just before each reels 20a-20c start as a symbol used as reach. When the symbol announced beforehand to them with reference to the array table of the symbol stored in the pattern storage section 34, carrying out counting of the driving signal from said reel actuation circuit 37 to a stepping motor to every reel 20a on either side and 20b is located in a symbol display window, CPU31 outputs the halt command of a driving signal to said reel actuation circuit 37, in order to form the reach by the symbol announced beforehand.

[0048] Moreover, when said reach advance notice is made, after making reel 20aa on either side and 20b stop and making the reach by the symbol besides an advance notice appear, each reels 20a and 20b are re-rotated; and he makes after an appropriate time suspend each reels 20a and 20b again, and is trying to show the reach by the symbol according to the selected pattern of operation in this example. Furthermore, about actuation of the advance notice flash plate at the time of said reach advance notice, and the reels 20a and 20b at the time of a re-revolution, two or more kinds of modes are set up, and it is made to perform by choosing one of modes by the lottery.
[0049] Drawing 6 shows the mode (henceforth an "advance notice mode of operation") concerning re-revolution actuation of the above-mentioned advance notice flash plate and a reel with the setups of the random-number width of face for choosing each mode. In this example, nine kinds of advance notice modes of operation M1-M3, R1-R3, and L1-L3 are set up about each pattern 1, 2, 4, 5, 7, and PTN 8 of operation which performs advance notice reach. While performing the location which performs an advance notice flash plate to any one symbol of a center, the right, and the left, in case Reels 20a and 20b are re-rotated, he is trying to rotate each reels 20a and 20b in one mode of the ******, slow revolution, and high-speed revolutions. Moreover, he sets up three kinds of advance notice actuation modes M0, R0, and L0, and is trying to set the location of an advance notice flash plate to a center, the right, or the left also about the control pattern PTN10 which performs a dummy reach advance notice.
[0050] Between the control pattern 1, 4, and PTN 7 which forms the reach by the symbol eventually announced beforehand in the example of a graphic display, and the control pattern 2, 5, and PTN 8 which forms the reach by the symbol besides an advance notice While fluctuating the width of face of the random-number value used for mode selection, it has set up by giving dispersion to the random-number width of face assigned to each advance notice mode of operation so that possibility that the reach by the symbol announced beforehand will be materialized may be changed by the advance notice mode of operation. That is, possibility that the reach by the symbol announced beforehand will appear becomes the highest, when an advance notice flash plate is given to central symbol display window 18c and each reels 20a and 20b on either side are ******(ed) at the time of a re-revolution. On the other hand, when an advance notice flash plate is given to left-hand side symbol display window 20a and the reels 20a and 20b at the time of a re-revolution carry out a high-speed revolution, possibility that the reach as an advance notice will be materialized becomes the lowest.
[0051] Drawing 7 and drawing 8 show the control flow of the pachinko game machine 1 by said control section 30. However, a graphic display and detailed explanation will be omitted [processing / an example and the pachinko game machine 1 / usual] here only about the control according to the pachinko ball having gone into the start-up winning-a-prize opening 14.
[0052] When a pachinko ball goes into the start-up winning-a-prize opening 14, to the winning-a-prize ball, drawing 7 shows a control flow at the time of determining the mode of the symbol display action by each reels 20a-20c by a series of above-mentioned lotteries, and is supervising whether the pachinko ball went into the start-up winning-a-prize opening 14 by ST1 of drawing 7 . If one of the above mentioned winning-a-prize ball detection sensors 40 is turned on, ST1 will serve as "YES." this -- responding -- CPU31 -- a winning-a-prize ball -- after incrementing the counter n for counting, the 1st lottery for winning-a-prize decision is performed to said winning-a-prize ball (STs 2 and 3).
[0053] When the random-number value of "30" is sampled by this lottery, it is "becoming it a great success", and CPU31 shifts to ST7 from ST4, a lottery with the independent above is performed, and the symbol aligned as a great success symbol is chosen from each symbols of "0" - "9." And it shifts to ST8 further, the lottery based on the random-number width of face of the A column of said drawing 5 is performed, and one pattern of PTN(s) 1-9 is chosen.
[0054] On the other hand, when the random-number value which is within the limits of "0" - "29" by ST3 is sampled, ST5 serves as "YES", it shifts to ST8, and one of patterns is chosen from PTN(s) 1-9 by the lottery based on the random-number width of face of the B column of drawing 5 . Moreover, "31 When ST6 is set to "YES", the pattern PTN10 which performs a dummy reach advance notice is chosen, when the random-number value which is within the limits of - "40" is sampled (ST11), and a larger random-number value than "40" is sampled, the pattern PTN11 of a blank is chosen (ST12)."
[0055] From M1-M3, R1-R3, and L1-L3, when one accompanied by a reach advance notice of the patterns 1, 2, 4, 5, 7, and PTN 8 of operation is furthermore chosen, ST9 serves as "YES", it shifts to ST10, the lottery based on the random-number width of face shown in said drawing 6 is performed, and one of advance notice modes of operation is chosen. Moreover, also when performing a dummy reach advance notice by ST11 is chosen, it shifts to ST10 and one of advance notice modes of operation is chosen from M0, R0, and L0. Then, CPU31 makes each selection result memorize in RAM36, and ends a series of processings. In addition, when Reels 20a-20c are rotating at this event, one hold lamp 17 is made turned on.
[0056] Drawing 8 shows a control flow over one winning-a-prize ball. This control routine is started by the interrupt signal under the condition which each reels 20a-20c are not rotating, it is confirmed first whether there is any winning-a-prize ball in ST21, and if this judgment is "YES", it will be confirmed whether a pattern of operation which performs a reach advance notice by following ST22 is chosen.
[0057] When the pattern of the either PTN 1, 2, 4, 5, 7, and 8 or PTN(s)10 of operation is chosen by each lottery of ST3 and ST8 of above mentioned drawing 7 , This ST22 serves as "YES". CPU31 After giving an advance notice flash plate to one symbol display windows 18c and 18b of a center, the right, and the left, and the symbol in 18a by following ST23 based on the selection result of ST10 of drawing 7 , each reels 20a-20c are started all at once. If predetermined time passes when patterns other than PTN10 which are furthermore a dummy reach advance notice are chosen, it will shift to ST27 from ST25, a sequential halt of the reels 20a and 20b on either side will be carried out, and the reach by the symbol besides said advance notice will be formed.
[0058] If predetermined time furthermore passes, CPU31 will shift to ST28 and will resume a revolution of the reels 20a and 20b on either side. that by which revolution actuation of the reel in this case is controlled based on the selection result of ST10 of said drawing 7 -- it is -- each reels 20a and 20b -- one voice of the ******, slow revolution, and high-speed revolutions -- it rotates more like, the reach by two or more sorts of symbols is fluctuated, and it is made to display
[0059] Then, although CPU31 stops again the reels 20a and 20b on either side and final reach is shown after predetermined time progress, when one control pattern of PTN(s) 1, 4, and 7 is chosen, reel halt control which the symbol announced beforehand suspends in symbol display window 18a on either side and 18b is performed (STs 29 and 30). On the other hand, when one control pattern of PTN(s) 2, 5, and 8 is chosen, halt actuation of each reel is controlled so that the reach by the symbol besides an advance notice is materialized (ST31).
[0060] On the other hand, when either of the control modes 3, 6, and PTN 9 which does not perform a reach advance notice is chosen, said ST22 and ST25 are served as to "NO", and ST26 serves as "YES." After CPU31 starts each reels 20a-20c without a reach advance notice in response to the judgment of ST22, it carries out a sequential halt of each reels 20a and 20b of the left and the right in response to the judgment of STs 25 and 26, and forms the reach by the symbol of arbitration (ST32).
[0061] Thus, when reach is materialized, it rotates central reel 20c, CPU31 performing reach action according to the selected mode of operation, and makes after an appropriate time stop this reel 20c to predetermined timing. In this case, if said 1st lottery is becoming it a great success, halt actuation of reel 20c will be controlled so that ST33 serves as "YES", it shifts to ST34 and the same symbol as the symbol of the right and left which constitute reach in central symbol display window 18c stops.
[0062] CPU31 restarts each reels 20a-20c, and it is made to rotate, when the symbol which furthermore aligned by this symbol halt differs from the great success symbol decided by ST7 of said drawing 7 until the great success symbol determined as each symbol display windows 18a-18c moves (STs 35 and 36). It shifts to ST37 after this, and the special game by which the winning-a-prize opening 15 is opened specially is performed.
[0063] In addition, when forming the symbol combination of blank reach, ST33 serves as "NO", it shifts to ST38, and CPU31 stops reel 20c to the timing as which a different symbol from a symbol on either side in central symbol display window 18c is displayed. Moreover, when [both] forming the symbol combination of a blank including a dummy reach advance notice, STs 25 and 26 serve as "NO", it shifts to ST39, and a symbol different, respectively stops each reels 20a-20c in order of the left, the right, and a center to the timing by which a deactivate indication is carried out.
[0064] In this way, after a series of control procedures are completed, it shifts to last ST40, the decrement of said number n of winning-a-prize balls is carried out, and the processing which receives one winning-a-prize ball to the start-up winning-a-prize opening 14 is ended.
[0065] Since according to the above-mentioned control a reach advance notice is performed before each reels 20a-20c start, a game person has a hope for

winning a prize from the start-up event of a reel, and comes to gaze at revolution actuation of each reels 20a-20c. Moreover, since great success reliability higher than the reach by the symbol besides an advance notice is given to the reach by the symbol announced beforehand, a game person holds a hope strong against a reach advance notice coming true, if the reach by the symbol further announced beforehand appears, will have much more hope to winning a prize, and will come to gaze at revolution actuation of central reel 20c.

[0066] Since each reels 20a and 20b are re-rotated and final reach is made to appear after an appropriate time according to the further above-mentioned control after making the reels 20a and 20b on either side suspend and making the reach by the symbol besides an advance notice appear When the reach eventually announced beforehand appears, an impression as if great success reliability went up to the game person with the re-revolution of a reel can be given. Moreover, since it is unknown, whether at the time of a re-revolution of a reel, a reach advance notice comes true can raise further the hope for the reach by the symbol the game person was warned to be by re-revolution of a reel.

[0067] further -- the voice of re-revolution actuation of this advance notice flash plate and reel -- even if it depends like, great success reliability is changed -- making -- moreover, the voice of reach action after reach formation -- since great success reliability is changed even if it depends like, whenever there are a revolution and a halt of a reel, a game person's hope can be raised, or an unexpected feeling can be given, and a game with interest can be developed.

[0068] In addition, although it is made to give an advance notice flash plate to the symbol in any one symbol display window, you may make it it shown in this example that an advance notice flash plate is given to the symbol not only in this but two symbol display windows or more, it may shift and the reach by that symbol indicate by the flash plate may be materialized. Moreover, the approach of an advance notice arranges LED in the sash of for example, not only a flash plate but a symbol display window, and may be made to perform lighting which surrounds the perimeter of a symbol. Moreover, when it replaces with a reel and a liquid crystal panel etc. constitutes an adjustable display, the color of the symbol for an advance notice may be changed, or it may be made to indicate the symbol for an advance notice by discernment using the specific character, a specific alphabetic character, etc. In addition, since a reach advance notice is made by indicating the symbol by which the deactivate indication is carried out by chance by discernment also when performing which embodiment, control concerning an advance notice becomes easy. Moreover, since what is necessary is just to establish the device for indicating the symbol by discernment also in respect of a hard configuration, an equipment configuration can be simplified.

[0069] Moreover, although he is trying to make it re-rotate in this example in the control mode which performs a reach advance notice after making each suspend a reel on either side A revolution of not only this but each reel is carried out only at a time, and you may make it form the reach by either the symbol announced beforehand or the symbol besides an advance notice. Moreover, the mode in which the target reach is made to appear, and the mode in which two steps of reaches are made to appear may be made intermingled, and you may make it appear in one revolution. Moreover, after making the reach by the symbol announced beforehand at the time of the first halt appear, in a culmination, the mode which makes the reach besides an advance notice appear may be set up by re-revolution of a reel.

[0070] It may not necessarily say that the reach of a different mode from the reach which appeared at the time of a previous temporary halt must be formed, and the same reach as the time of a temporary halt may be made to appear after a re-revolution of a reel furthermore. Moreover, at the time of a temporary halt, not reach but a symbol which is right and left different is stopped, the possibility of a "blank" is suggested to the game person, and you may make it form reach after a re-revolution of Reels 20a and 20b. Moreover, as described above, when the reach advance notice by two or more sorts of symbols is performed, control which fluctuates the reach according to the symbol besides an advance notice in making the reach by each symbol appear in order, and forming the reach by one of symbols eventually **** is also possible. In this case, if great success reliability different, respectively is given to the reach by each symbol for an advance notice, expecting formation of reach with more high reliability, a game person comes to pay much more attention by the fluctuation display of a symbol, and by the time a reel stops eventually, he can raise a game person's hope more than enough.

[0071] In addition, although the example which applied this invention was shown in the pachinko game machine made to suspend the fluctuation display of each symbol to the timing of arbitration here, it is possible to include this kind of function not only in this but in game machines, such as a slot machine which draws a predetermined symbol according to halt actuation of a game person, and is made to suspend a fluctuation display.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the front view showing the appearance of the pachinko game machine concerning one example of this invention.
[Drawing 2] It is the front view showing the appearance of a face-of-a-board center section.
[Drawing 3] It is the front view which fractured the part which shows the configuration of the light source for symbol lighting.
[Drawing 4] It is the block diagram showing the electric configuration of a pachinko game machine.
[Drawing 5] It is the explanatory view in which matching the pattern of a symbol fluctuation display action with the activity etc., and showing it.
[Drawing 6] It is the explanatory view in which matching the advance notice mode of operation for a reach advance notice with the activity etc., and showing it.
[Drawing 7] It is the flow chart which shows the control procedure for determining the mode of symbols list ** to the winning-a-prize ball to start-up winning-a-prize opening.
[Drawing 8] It is the flow chart which shows the symbol display control to the winning-a-prize ball to start-up winning-a-prize opening.
[Description of Notations]
1 Pachinko Game Machine
19 Light Source
13 Symbol Adjustable Display
20a, 20b, 20c Reel
30 Control Section
31 CPU
35 Random-Number Lottery Section

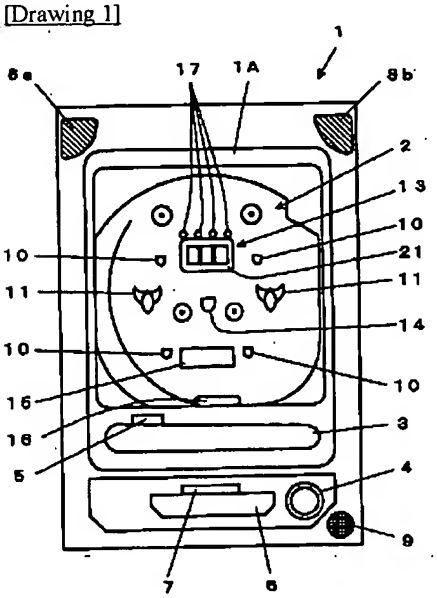
[Translation done.]

* NOTICES *

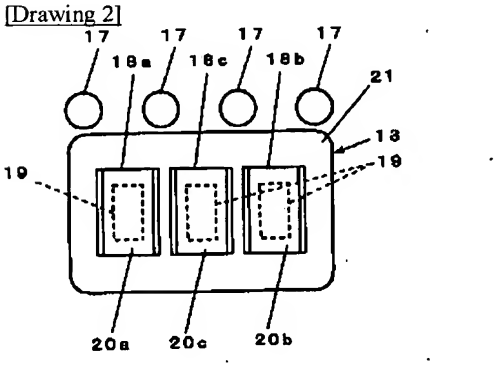
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

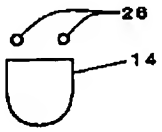
DRAWINGS

[Drawing 1]

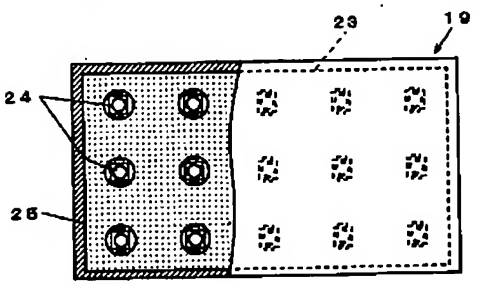


[Drawing 2]





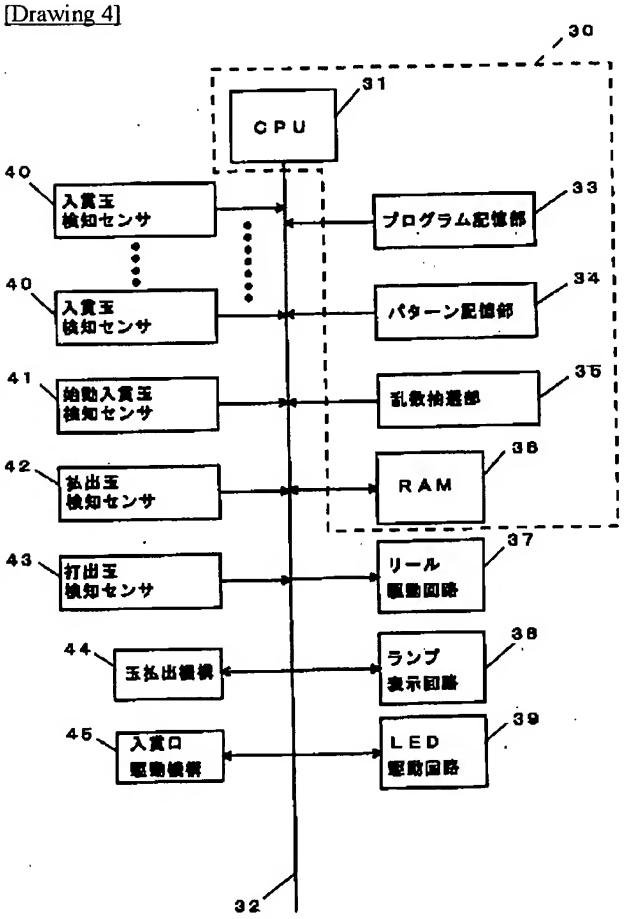
[Drawing 3]



[Drawing 5]

	動作内容	Ⓐ大当たり時乱数幅	Ⓑはずれ時乱数幅	Ⓒ大当たり信頼度(%)	リーチアクション
PTN1	予告あり→予告シンボルによるリーチ	30	1	50.0	モード1
PTN2	予告あり→予告外シンボルによるリーチ	10	2	14.3	
PTN3	予告なし→リーチ	10	7	4.5	
PTN4	予告あり→予告シンボルによるリーチ	18	3	16.7	モード2
PTN5	予告あり→予告外シンボルによるリーチ	6	5	3.2	
PTN6	予告なし→リーチ	6	21	0.9	
PTN7	予告あり→予告シンボルによるリーチ	12	6	6.3	モード3
PTN8	予告あり→予告外シンボルによるリーチ	4	12	1.1	
PTN9	予告なし→リーチ	4	42	0.3	
PTN10	予告あり→リーチなし(はずれ)			0	
PTN11	予告なし→リーチなし(はずれ)			0	

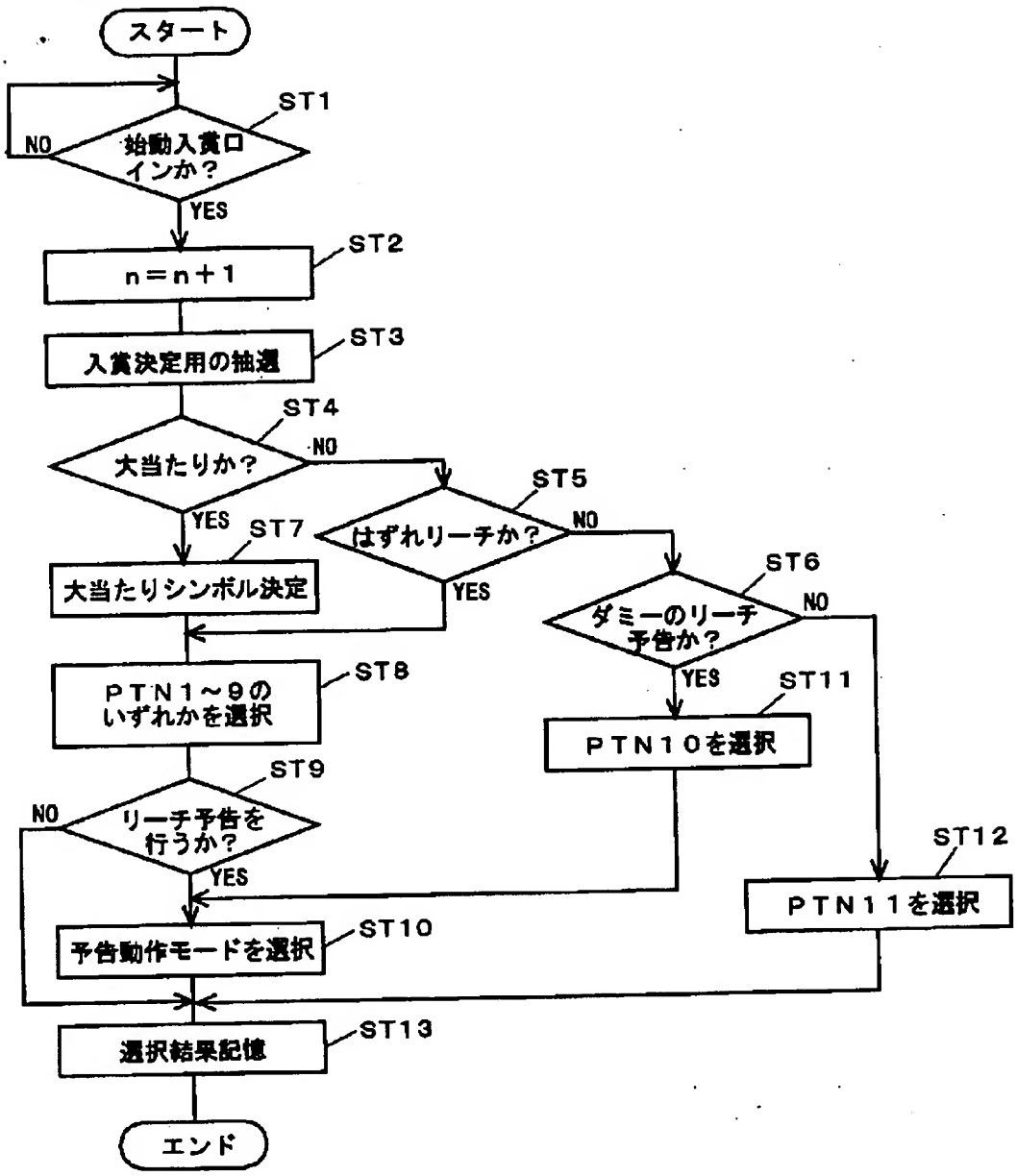
[Drawing 4]



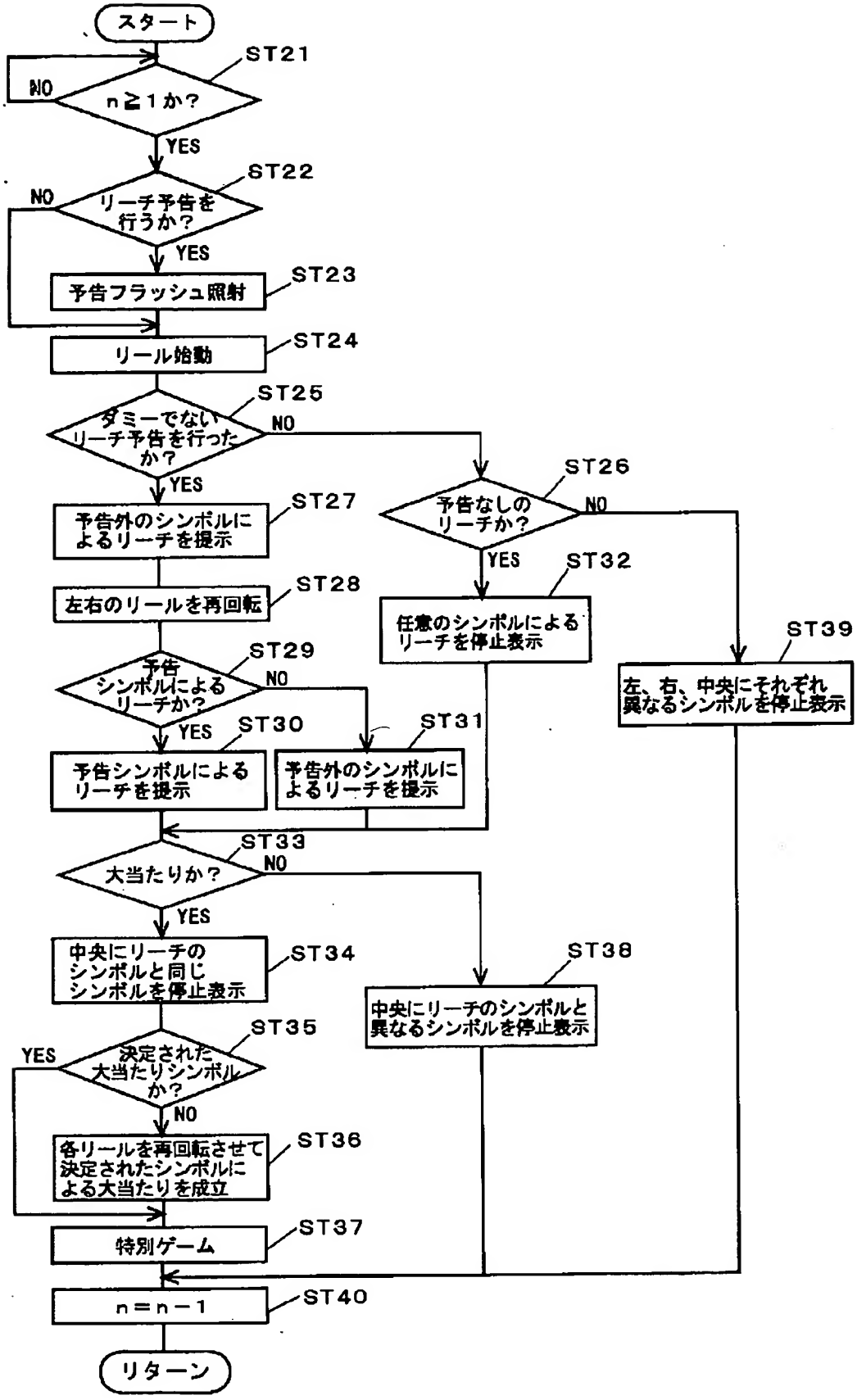
[Drawing 6]

	予告フラッシュの位置	再回転時のリール回転動作	乱数幅(PTN1, 4, 7)	乱数幅(PTN2, 5, 8)	PTN10
M1	中	脈送り	20	4	−
M2	中	スロー回転	12	6	−
M3	中	高速回転	8	10	−
R1	右	脈送り	15	6	−
R2	右	スロー回転	9	9	−
R3	右	高速回転	6	15	−
L1	左	脈送り	10	8	−
L2	左	スロー回転	5	12	−
L3	左	高速回転	4	20	−
M0	中	−	−	−	20
R0	右	−	−	−	30
L0	左	−	−	−	40

[Drawing 7]



[Drawing 8]



[Translation done.]

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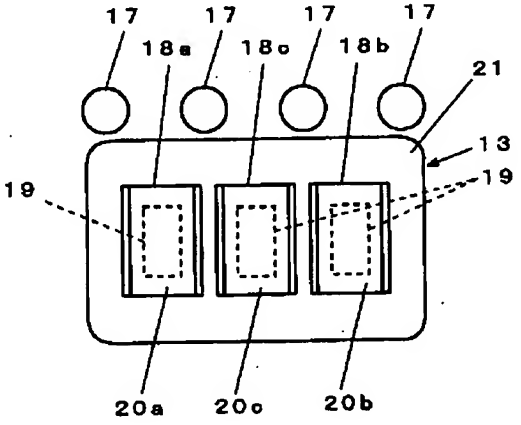
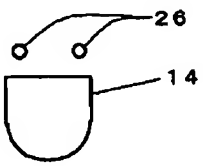
(71)出願人　000169477
高砂電器産業株式会社
大阪府大阪市中央区南船場２丁目９番14号
(72)発明者　植畑　高史郎
大阪市鶴見区今津北４丁目９番10号　高砂電器産業株式会社内
(74)代理人　100078916
弁理士　鈴木　由充

(54)【発明の名称】　シンボル可変表示遊技機

(57)【要約】
【課題】　シンボルの変動表示動作や変動表示の停止動作に遊技者の関心を惹きつけ、かつ入賞に対する期待感を高められるようにする。
【解決手段】　各リール２０ａ～２０ｃの裏側には、シンボル表示窓１８ａ～１８ｃのシンボル停止位置に合わせて、面発光する光源１９が配備されている。機体内部の制御部は、始動入賞口１４にパチンコ玉が入ったことに応じて抽選を行い、所定の条件が成立したことに応じて、中央，右，左のいずれかのシンボルに対し、前記光源１９によるフラッシュを照射する。このフラッシュによる識別表示は、左右のリール２０ａ，２０ｂの停止により、フラッシュ表示されたシンボルによるリーチが出現することを予告するためのもので、抽選がはずれのときよりも当たりのときに、高い確率で予告が当たるように制御される。





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【特許請求の範囲】

【請求項1】　複数種のシンボルを変動させて表示した後、前記シンボル変動表示を停止していずれかのシンボルを表示するシンボル可変表示部を複数個備え、すべてのシンボル可変表示部の変動表示が停止した時に入賞となるシンボルの組合せを成立させるか否かを、抽選により決定するようにしたシンボル可変表示遊技機において、

遊技者に対し、入賞が成立し得るリーチの出現およびそのリーチの態様を予告する予告手段と、

各シンボル可変表示部の変動表示が少なくとも1個を除いて停止した段階で、前記予告された態様のリーチおよび予告外の態様のリーチがそれぞれ所定の確率で出現するように、各シンボル可変表示部の変動表示の停止動作を制御する制御手段とを具備し、

前記制御手段は、前記抽選が当たっているときに抽選がはずれているときよりも高い確率で、予告された態様のリーチが出現するような制御を実施して成るシンボル可変表示遊技機。

【請求項2】　前記予告手段は、各シンボル可変表示部が変動表示を開始する前に停止表示されている各シンボルのうちの少なくとも1個を識別表示することにより、そのシンボルの描うリーチが出現することを予告する請求項1に記載されたシンボル可変表示遊技機。

【請求項3】　前記制御手段は、少なくとも1個を除く各シンボル可変表示部に対し、各変動表示を停止させてそれぞれ所定のシンボルを停止表示させた後、各変動表示を再開させ、最終的に予告された態様のリーチまたはそのリーチ以外のシンボルの組合せが出現するタイミングで各変動表示を停止させる手段を含んで成る請求項1または2に記載されたシンボル可変表示遊技機。

【発明の詳細な説明】

【0001】

【産業上の利用分野】この発明は、パチンコ遊技機やスロットマシンのように、複数種のシンボルを変動させて表示した後、そのシンボル変動表示を停止して、1または複数のシンボル表示位置にいずれかのシンボルを停止表示させるシンボル可変表示部を、複数個備えたシンボル可変表示遊技機に関し、特にすべてのシンボル可変表示部の変動表示が停止したときに入賞となるシンボルの組合せを成立させるか否かを、抽選により決定するようにしたシンボル可変表示遊技機に関する。

【0002】

【従来の技術】従来のパチンコ遊技機は、盤面の中央部にシンボル表示部が設けられ、このシンボル表示部の下方に始動入賞口が、さらにその下方に特別入賞口が、それぞれ配備されている。

【0003】前記シンボル表示部は、盤面に、複数個（通常3個）のシンボル可変表示部（以下単に「可変表示部」という）を配備して成る。これら可変表示部とし

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ては、外周面に複数種のシンボルが表されたリール、液晶表示器やCRTなどによる画像上で複数種のシンボルがスクロール表示される表示領域、LEDなどをセグメント配列して数字やアルファベット文字を変動表示する文字表示器などが存在する。各可変表示部は、始動入賞口にパチンコ玉が入ったことに応じて一斉に始動して、複数種のシンボルを高速で変動させて表示した後、各変動表示を左，右，中央の順に停止して、いずれかのシンボルを表示させる。

【0004】また上記のパチンコ遊技機では、前記始動入賞口にパチンコ玉が入ると、機体内部で抽選処理を実施しており、この抽選が「当たり」であれば、シンボル表示窓に例えば同じシンボルが停止して並んで、特別入賞が成立する。この特別入賞の成立に応じて、常時は閉じた状態の特別入賞口が開動作して大きく開口し、所定個数のパチンコ玉が入るまでの間、この開口状態が保持される。

【0005】なお可変表示部の作動中に、始動入賞口にパチンコ玉が入ったときは、一定個数までは保留玉数として記憶される。この場合、始動入賞口にパチンコ玉が入る都度、前記抽選が実施されてその結果が記憶されてゆき、先のシンボル可変表示動作が終了すると、つぎの保留玉に対応するシンボル可変表示動作が開始され、前記抽選結果に応じたシンボルが停止表示される。なお保留玉数は、シンボル可変表示装置の近傍に設けられた複数個の保留ランプの点灯により各遊技者へ知らされる。

【0006】一般に抽選が当たっている場合には、「7」「7」「7」の如く、同じシンボルの組み合わせが成立するように各可変表示器の停止動作が制御されるので、左右の可変表示部の変動表示が停止して同じシンボルが表示されると、「リーチ」と呼ばれる入賞成立前の状態となり、各遊技者は期待感をもって、中央の可変表示器の停止動作を待つことになる。

【0007】近年のパチンコ遊技機では、「リーチ」になったとき、最後の中央の可変表示器の停止動作をゆっくりと行うことにより、入賞への各遊技者の期待感や興奮度合を高めると共に、入賞確率に応じた複数種の停止の態様を用意して、リーチの種別を、例えば「通常リーチ」、「ロングリーチ」、「スーパーリーチ」、「スペシャルリーチ」の如く区分している。

【0008】例えば「通常リーチ」では、左右の可変表示器のシンボル変動表示が停止した後、1回転未満で中央の可変表示器のシンボル変動表示を停止させ、同様に「ロングリーチ」では1～2回転後に、「スーパーリーチ」では2～3回転後に、「スペシャルリーチ」では3回転以上の後に、それぞれ中央のシンボル変動表示を停止させる。この中央のシンボル変動表示は、入賞確率が高くなるほど変動表示の時間が長くなるように制御されており、リーチ成立後の最後のシンボル変動表示が長くなるほど、遊技者の入賞の成立に対する期待感が高めら

れるようになる。

【0009】

【発明が解決しようとする課題】しかしながら上記の方法では、たとえ中央のシンボル変動表示の期間の長さにより入賞確率を報知しても、リーチが成立するまでのシンボル変動表示が単調であるため、遊技者は、リーチが出現するまではシンボル変動表示に注目しない傾向がある。したがってシンボルの変動表示が開始された時点から遊技者の目を変動表示に惹きつけて、入賞に対する期待感を高めるのは困難である。

【0010】この発明は上記問題点に着目してなされたもので、シンボルの変動表示動作やその変動表示の停止動作に遊技者の関心を惹きつけ、かつこれらの動作により遊技者の入賞に対する期待感を十分かつ確実に高め、しかも興趣あるゲームを展開可能なシンボル可変表示遊技機を提供することを目的とする。

【0011】

【課題を解決するための手段】請求項1の発明では、複数種のシンボルを変動させて表示した後、前記シンボル変動表示を停止していずれかのシンボルを表示するシンボル可変表示部を複数個備え、すべてのシンボル可変表示部の変動表示が停止した時に入賞となるシンボルの組合せを成立させるか否かを、抽選により決定するようにしたシンボル可変表示遊技機に、遊技者に対し、入賞が成立し得るリーチの出現およびそのリーチの態様を予告する予告手段と、各シンボル可変表示部の変動表示が少なくとも1個を除いて停止した段階で、前記予告された態様のリーチおよび予告外の態様のリーチがそれぞれ所定の確率で出現するように、各シンボル可変表示部の変動表示の停止動作を制御する制御手段とを具備させ、制御手段により、前記抽選が当たっているときに抽選がはずれているときよりも高い確率で、予告された態様のリーチが出現するようにしている。

【0012】請求項2の発明では、前記予告手段を、各シンボル可変表示部が変動表示を開始する前に停止表示されている各シンボルのうちの少なくとも1個を識別表示することにより、そのシンボルの揃うリーチが出現することを予告するように構成する。

【0013】請求項3の発明では、前記制御手段に、少なくとも1個を除く各シンボル可変表示部に対し、各変動表示を停止させてそれぞれ所定のシンボルを停止表示させた後、各変動表示を再開させ、最終的に予告された態様のリーチまたはそのリーチ以外のシンボルの組合せが出現するタイミングで各変動表示を停止させる手段を含ませている。

【0014】

【作用】請求項1の発明によれば、遊技者は、所定の態様のリーチが出現するという予告を受けて、予告された態様のリーチの出現に期待を持ち、各変動表示の停止に注視するようになる。また予告されたリーチが出現したときには、予告外のリーチが出現したときよりも高い確率で入賞が成立するので、予告が当たることによって遊技者の期待感がますます高められる。

【0015】請求項2の発明によれば、各可変表示部の変動表示が開始される前にリーチの予告がなされるので、遊技者は、変動表示が開始された時点から、期待感をもって各シンボルの変動表示に注視するようになる。

【0016】請求項3の発明によれば、予告の後に、少なくとも1個を除く各可変表示部のシンボルの変動表示が一旦停止した後に再変動し、最終的に停止したときに予告された態様のリーチまたはそのリーチ以外のシンボルの組合せが出現する。

【0017】

【実施例】図1は、この発明の一実施例であるパチンコ遊技機1の外観を示す。このパチンコ遊技機1は、機体の前面に遊技盤1Aを備え、その下方にパチンコ玉投入皿3，操作ハンドル4，パチンコ玉払出口5，受け皿6，余剰玉放出口7，スピーカー9などが、その上方に大当たりランプ8a，8bが、それぞれ設けられた構成のものである。

【0018】前記遊技盤1Aはガラス扉を備え、盤面2には、多数の障害釘（図示せず），入賞口10，チューリップ役物11などが、それぞれ所定の位置に配備されている。盤面2の中央部には、シンボル可変表示装置13が設けられ、このシンボル可変表示装置13の下方に始動入賞口14が、さらにその下方に特別入賞口15が、さらにその下方にアウト口16が、それぞれ設けられている。またシンボル可変表示装置13の上方位置には、複数個（図示例では4個）の保留ランプ17が配備されている。

【0019】前記パチンコ玉投入皿3は、ゲームに先立ち、複数個のパチンコ玉を投入する部分であり、図示しないパチンコ玉の取込口に連通している。操作ハンドル4は、図示しない打撃部を駆動させて前記取込口から取り込まれたパチンコ玉を盤面2上へ打ち出すためのものである。

【0020】前記シンボル可変表示装置13は、盤面2の開口部（図示せず）上に取り付けられた前面パネル21や、機体内部に前記前面パネル21に対向させて配備されるリールユニット（図示せず）などにより構成される。前面パネル21には、図2に示すように、3個のシンボル表示窓18a，18b，18cが形成され、各シンボル表示窓18a，18b，18cの形成位置に対向させて前記リールユニットの3個のリール20a，20b，20cが配置される。

【0021】前記リール20a，20b，20cは、周面に、「0」～「9」の各数字によるシンボルが配置されており、リールが停止している状態下では、対応するシンボル表示窓18a，18b，18cにそれぞれ1個のシンボルが停止表示される。さらにこの実施例のシン

ボル可変表示装置１３は、各リール２０ａ～２０ｃの裏側に、シンボルの停止表示位置に対応させて、それぞれ面状に発光する光源１９が配置される。これら光源１９は、図３に示すように、配線基盤２３上に複数個のＬＥＤ２４をそれぞれ複数個マトリクス上に配列配置し、これら基板２３およびＬＥＤ２４を、拡散材を含む樹脂２５によりモールドした構成のものである。

【００２２】なお実際に用いられる光源１９では、ＬＥＤ２４は図示よりもはるかに密に配置され、また赤，緑、青の各色彩光を発光するものが所定数ずつ採用される。後記する制御部３０により各発光色毎のＬＥＤ２４を個別に発光させることにより、シンボル表示窓内のシンボルに赤，緑，青のいずれかの色彩光による背後照明が施される。またいずれかの発光色のＬＥＤ２４を点滅させることにより、後記するリーチ予告に用いるフラッシュを実現することができる。

【００２３】なお各シンボル表示窓１８ａ～１８ｃに表示させるシンボルは１個に限らず、複数個のシンボルを表示させてもよい。またこの実施例では、複数種のシンボルが表されたリール２０ａ～２０ｃを用いてシンボルの変動表示を実現しているが、リールに代えて、ディスク状やベルト状のものなどを用いることもできる。また液晶表示器やＣＲＴなどにより、複数種のシンボルをスクロール表示させるようにしてもよい。なお図２中の符号２６は、パチンコ玉の落下方向を規制するための傷害釘である。

【００２４】このパチンコ遊技機１では、前記始動入賞口１４にパチンコ玉が入ると、機体内部で乱数による抽選を実行して、各シンボル表示窓１８ａ，１８ｂ，１８ｃに入賞となるシンボルの組合せを整列させるか否かを決定するようにしている。そしてこの抽選の後に、各リール２０ａ，２０ｂ，２０ｃを一斉に始動した後、左，右，中央の順に停止させる。

【００２５】このとき前記の抽選が「大当たり」であれば、各シンボル表示窓１８ａ～１８ｃに同じ数字のシンボルが揃うように、各リール２０ａ～２０ｃの停止動作が制御される。ついでこの入賞の成立により、前記特別入賞口１５が所定回数開動作する特別ゲームモードへと移行し、このモード下で特別入賞口に多数のパチンコ玉を入れることにより、パチンコ投入皿３または受け皿６に多数のパチンコ玉が払出しされる。なおこの実施例では、「０」～「９」のいずれのシンボルによる入賞にも同等の価値をもたせているが、これに限らず、特定のシンボル（例えば「７」）が揃う入賞が成立した場合は、他のシンボルによる入賞よりも高い特典を与えるようにしてもよい。

【００２６】またこの実施例では、前記抽選が「はずれ」となった場合も、左右の各シンボル表示窓１８ａ，１８ｂに同じシンボルが停止する「リーチ」を所定の確率で出現させることにより、リーチの出現により所定の入賞確率が示されるようにしている。さらにこのリーチを出現させる際には、各リール２０ａ，２０ｂ，２０ｃが始動する前に、遊技者にリーチの出現を予告するようにしている。

【００２７】前記リーチの予告は、具体的には、各リール２０ａ～２０ｃが始動する前に、左、右、中央のいずれかのシンボル表示窓１８ａ，１８ｂ，１８ｃ内に停止表示されているシンボルの背後の光源１９を点滅させて、シンボルに所定色彩のフラッシュを照射することにより、そのシンボルによるリーチが出現することを示唆するものである（以下このリーチ予告に用いるフラッシュを「予告フラッシュ」という）。なお実際のリール停止制御においては、必ずしもこの予告シンボルによるリーチを出現させる訳ではなく、予告外のシンボルによるリーチ、またはリーチ以外のシンボルの組合せを出現させる場合もある。また予告なしにリーチを出現させる従来のリール制御動作も、所定の確率で実行される。

【００２８】リーチの出現確率については、詳細は後記するが、前記抽選が大当たりになったときには、抽選がはずれたときよりも高い確率で予告シンボルによるリーチが出現するように設定されている。またこの実施例では、遊技者の入賞に対する期待感が徐々に高まるように、左右のリールを一旦停止させて予告外のシンボルによるリーチを出現させた後に、各リールを再回転させ、しかる後に各リールを最終的に停止させて、予告シンボルまたは予告外のシンボルのいずれかによるリーチを出現させるようにしている。

【００２９】図４は、上記パチンコ遊技機１の電気的な構成例を示している。図中、３０は、マイクロコンピュータで構成される制御部であり、ＣＰＵ３１を制御・演算の主体とし、プログラム記憶部３３，パターン記憶部３４，乱数抽選部３５，ＲＡＭ３６などを含んでいる。

【００３０】前記プログラム記憶部３３には、ゲーム実行のためのプログラムが、またパターン記憶部３４には、各リール２０ａ，２０ｂ，２０ｃに描かれたシンボルの配列パターンが、それぞれ記憶される。前記乱数抽選部３５は、前記入賞を決定するための抽選や各リール２０ａ～２０ｃによるシンボル表示動作の態様を決定するための抽選を実行するもので、各種抽選を実行するための乱数を発生する乱数発生部や、取り込んだ乱数値を照合するための抽選テーブルを含んでいる。

【００３１】前記ＣＰＵ３１には、バス３２を介して、複数の入賞玉検知センサ４０，４０・・・，始動入賞玉検知センサ４１，払出玉検知センサ４２，打出玉検知センサ４３，玉払出機構４４，入賞口駆動機構４５，リール駆動回路３７，ランプ表示回路３８，ＬＥＤ駆動回路３９などが接続されている。

【００３２】各入賞玉検知センサ４０は、各入賞口１０，特別入賞口１５，チューリップ役物１１に、始動入賞玉検知センサ４１は始動入賞口１４にそれぞれ設けら

れ、パチンコ玉が対応する入賞口や役物に入ったことを検知して、電気信号を出力する。

【００３３】払出玉検知センサ４２は、機体内部のパチンコ玉貯留部（図示せず）から前記パチンコ玉払出口５への払出通路に設けられ、払い出されるパチンコ玉を検知して電気信号を出力する。打出玉検知センサ４３は、打撃部の近傍や遊技盤１Ａの玉通路などに設けられ、盤面２に打ち出されたパチンコ玉を検知して電気信号を出力する。

【００３４】玉払出機構４４は、パチンコ払出口５にパチンコ玉を送り出すためのもので、ＣＰＵ３１からの指令により、前記したパチンコ玉貯留部に貯留されたパチンコ玉を所定数だけ払出通路へ放出する。入賞口駆動機構４５は、前記特別入賞口１５，入賞口１０，チューリップ役物１１などの開閉動作を制御するためのものである。

【００３５】リール駆動回路３７は、シンボル可変表示装置１３の各リール２０ａ～２０ｃを回転および停止させるためのステッピングモータ（図示せず）の動作を制御する。またランプ表示回路３８は、大当たりランプ８ａ，８ｂや保留ランプ１７などの点灯動作を制御し、ＬＥＤ駆動回路３９は、前記したシンボル照明用の光源１９を構成する各ＬＥＤ２４の点灯動作を制御する。

【００３６】前記した入賞決定用の抽選は、「０」～「２９９」の範囲内で発生する乱数値を取り込むことにより行われるもので、前記抽選テーブルでは、入賞を成立させるための大当たり乱数値として「３０」の乱数値を割り当てることにより、１／３００の確率で「大当たり」となるように設定している。またリーチにはなるが最終的にはずれとなるシンボルの組合せ（以下これを「はずれリーチ」という）には、「０」～「２９」の各乱数値が割り当てられ、リーチを出現させないのにダミーのリーチ予告を伴うはずれのシンボル組合せには「３１」～「４０」の各乱数値が割り当てられる。そして残りの「４１」～「２５９」のいずれかの乱数値がサンプリングされた場合は、リーチもダミーのリーチ予告もなされない単なる「はずれ」となる。

【００３７】上記の抽選により入賞またははずれリーチとなるシンボル組合せを成立させることが決定すると、乱数抽選部３５はさらに別の抽選を行って、リーチの態様としてつぎの図５に示す９個の動作パターンＰＴＮ１～ＰＴＮ９のいずれを実行するかを決定する。なお入賞を成立させることが決定した場合は、さらに個別の抽選により、「０」～「９」のいずれのシンボルによる入賞を成立させるかを決定し、予告を伴うリーチを出現させるにあたっては、どのような態様による予告を行うかを決定するための抽選を実行する。

【００３８】図５は、この実施例で用いられるシンボル変動表示動作のパターンＰＴＮ１～ＰＴＮ１１（以下単に「動作パターンＰＴＮ１～ＰＴＮ１１」という）について、それぞれその動作内容、抽選により各パターンが選択される条件、各パターンの出現により最終的に入賞が成立する確率（以下この確率を「大当たり信頼度」という）、リーチ後の演出動作モードを対応づけて示す。

【００３９】図中、ＰＴＮ１～ＰＴＮ９は、前記したようにリーチとなるシンボル組合せを成立させる際に選択される動作パターンであって、ＰＴＮ１，４，７の各パターンでは、リーチ予告を行った後に予告されたシンボルによるリーチを出現させる。他方、ＰＴＮ２，５，８の各動作パターンでは、リーチ予告を行うが予告外のシンボルによるリーチを出現させる。さらにＰＴＮ３，６，９の各動作パターンでは、予告なしに各リール２０ａ，２０ｂ，２０ｃを始動した後、左右のリール２０ａ，２０ｂを順に停止して任意のシンボルによるリーチを成立させるようにしている。

【００４０】各動作パターンＰＴＮ１～９によるリーチは、いずれもリーチ成立後に所定の態様による演出（以下これを「リーチアクション」という）が行われるもので、ＰＴＮ１～３、ＰＴＮ４～６、ＰＴＮ７～９の各パターン群毎に異なる態様のリーチアクションを行うようにしている。

【００４１】なおリーチアクションとしては、たとえば前記した光源１９を用いて、停止表示された左右のシンボル、または変動表示中の中央のシンボルを照明したり、中央のリールをゆっくりと回転させるなどの動作が考えられる。照明によるリーチアクションを採用する場合は、各モード毎に異なる色彩の照明光を用いたり、ＬＥＤの発光時間を異ならせるなどの制御がなされる。またモード毎に中央のリールの回転制御を変える場合は、従来の「ロングリーチ」、「スーパーリーチ」、「スペシャルリーチ」のように、リールを回転させる時間をモード間で変動させる。

【００４２】図５中のＡ，Ｂ欄は、それぞれ前記した第２の抽選によりリーチにかかる動作パターンを選択するための乱数幅（乱数の数）であって、Ａ欄は前記第１の抽選が大当たりの場合に採用される乱数幅を、Ｂ欄は抽選がはずれの場合に採用される乱数幅を、それぞれ示す。またＣ欄は、これら乱数幅の設定により各動作パターンに付与される大当たり信頼度（％）を示す。

【００４３】たとえば第１のパターンＰＴＮ１では、大当たり時には「０」～「９９」の乱数値のうちの３０個の乱数値がこのパターンを選択するための乱数値として設定されているのに対し、はずれ時にこのパターンを選択するための乱数値は、たった１個である。したがってこのＰＴＮ１が出現したときの大当たり信頼度Ｐは、Ｐ＝（３０×１／３００）／｛（３０×１／３００）＋３０／３００｝＝５０％となる。

【００４４】一方、第２のパターンＰＴＮ２では、このパターンを選択するための乱数値として、大当たり時には１０個の乱数値が、はずれ時には２個の乱数値が、そ

れぞれ設定される。したがってこのＰＴＮ２が出現したときの大当たり信頼度Ｐは、Ｐ＝（１０×１／３００）／｛（１０×１／３００）＋（２×３０／３００）｝＝１４．３％となる。

【００４５】以下の動作パターンについても同様であって、この実施例では、各動作パターンＰＴＮ１～ＰＴＮ９間で乱数幅を変動させるとともに、パターン毎に大当たり時とはずれ時との乱数幅を変動させて設定することにより、予告を伴うリーチが出現したときに予告をともなわないリーチが出現したときよりも大当たり信頼度が高くなり、かつ予告されたシンボルによるリーチが出現したときに予告外のシンボルによるリーチが出現したときよりも大当たり信頼度が高くなるようにしている。また前記した３種類のリーチアクションのモード間においても、第１のモードが出現したときに最も大当たり信頼度が高くなり、ついで第２のモード、つぎに第３のモードというように、モード毎に大当たり信頼度を変動させている。

【００４６】なお図中、ＰＴＮ１０は、リーチとならないシンボル組合せにダミーのリーチ予告を行う動作パターン、ＰＴＮ１１は、リーチもダミーのリーチ予告もなしに、単にはずれとなる動作パターンである。これらの動作パターンが実行された場合は、左右のリールが停止した時点ではずれであることが判明するので、この時点で大当たり信頼度は０％となる。

【００４７】前述したようにこの実施例におけるリーチ予告は、各リール２０ａ～２０ｃが始動する直前にたまたまシンボル表示窓内に停止表示されているシンボルを、リーチとなるシンボルとして選択するものである。ＣＰＵ３１は、予告されたシンボルによるリーチを成立させるために、左右のリール２０ａ，２０ｂ毎に、前記リール駆動回路３７からステッピングモータへの駆動信号を計数しつつ、パターン記憶部３４に格納されたシンボルの配列テーブルを参照して、予告されたシンボルがシンボル表示窓内に位置する時点で前記リール駆動回路３７に駆動信号の停止指令を出力する。

【００４８】またこの実施例では、前記リーチ予告がなされた場合は、左右のリール２０ａａ，２０ｂを、一旦停止させて予告外のシンボルによるリーチを出現させた後に、各リール２０ａ，２０ｂを再回転させ、しかる後に、各リール２０ａ，２０ｂを再び停止させて、選択された動作パターンに応じたシンボルによるリーチを提示するようにしている。さらに前記リーチ予告時の予告フラッシュ、および再回転時のリール２０ａ，２０ｂの動作について、複数通りの態様を設定し、抽選によりいずれかの態様を選択して実行するようにしている。

【００４９】図６は、上記した予告フラッシュおよびリールの再回転動作にかかる態様（以下、「予告動作モード」という）をそれぞれの態様を選択するための乱数幅の設定条件とともに示す。この実施例では、予告リーチを行う各動作パターンＰＴＮ１，２，４，５，７，８について、９通りの予告動作モードＭ１～Ｍ３，Ｒ１～Ｒ３，Ｌ１～Ｌ３を設定して、予告フラッシュを行う位置を中央，右，左のいずれか１つのシンボルに対して行うとともに、リール２０ａ，２０ｂを再回転させる際に、各リール２０ａ，２０ｂを、齣送り、スロー回転、高速回転のいずれかの態様で回転させるようにしている。またダミーのリーチ予告を行う制御パターンＰＴＮ１０についても、３通りの予告動作態様Ｍ０，Ｒ０，Ｌ０を設定して、予告フラッシュの位置を中央，右，左のいずれかに設定するようにしている。

【００５０】図示例では、最終的に予告されたシンボルによるリーチを成立させる制御パターンＰＴＮ１，４，７と、予告外のシンボルによるリーチを成立させる制御パターンＰＴＮ２，５，８との間で、モード選択に用いる乱数値の幅を変動させるとともに、各予告動作モードに割り当てる乱数幅にばらつきをもたせることにより、予告されたシンボルによるリーチが成立する可能性が予告動作モードによって変動するように設定している。すなわち予告されたシンボルによるリーチが出現する可能性は、中央のシンボル表示窓１８ｃに予告フラッシュが施され、かつ左右の各リール２０ａ，２０ｂが再回転時に齣送りされるとき、最も高くなる。これに対し、左側のシンボル表示窓２０ａに予告フラッシュが施されて、再回転時のリール２０ａ，２０ｂが高速回転した場合は、予告どおりのリーチが成立する可能性は最も低くなる。

【００５１】図７および図８は、前記制御部３０によるパチンコ遊技機１の制御の流れを示す。ただしここでは、始動入賞口１４にパチンコ玉が入ったことに応じた制御についてのみ示し、パチンコ遊技機１の通常の処理については、図示および詳細な説明を省略することにする。

【００５２】図７は、始動入賞口１４にパチンコ玉が入ったときに、その入賞玉に対し、上記した一連の抽選により、各リール２０ａ～２０ｃによるシンボル表示動作の態様を決定する際の制御の流れを示すもので、図７のＳＴ１では、始動入賞口１４にパチンコ玉が入ったかどうかを監視している。前記したいずれかの入賞玉検知センサ４０がオンになると、ＳＴ１が「ＹＥＳ」となる。これに応じてＣＰＵ３１は、入賞玉計数用のカウンタｎをインクリメントした後、前記入賞玉に対し、入賞決定用の第１の抽選を実行する（ＳＴ２，３）。

【００５３】この抽選により「３０」の乱数値がサンプリングされた場合は、「大当たり」となり、ＣＰＵ３１は、ＳＴ４からＳＴ７へと移行して、前記とは独立の抽選を実行し、「０」～「９」の各シンボルの中から大当たりシンボルとして整列させるシンボルを選択する。そしてさらにＳＴ８に移行して、前記図５のＡ欄の乱数幅に基づく抽選を実行し、ＰＴＮ１～９のいずれかのパタ

ーンを選択する。

【0054】一方、ST3で「0」～「29」の範囲内にある乱数値がサンプリングされた場合は、ST5が「YES」となってST8へと移行し、図5のB欄の乱数幅に基づく抽選により、PTN1～9の中からいずれかのパターンが選択される。また「31」～「40」の範囲内にある乱数値がサンプリングされた場合はST6が「YES」となって、ダミーのリーチ予告を行うパターンPTN10が選択され（ST11）、「40」より大きい乱数値がサンプリングされた場合は、はずれのパターンPTN11が選択される（ST12）。

【0055】さらにリーチ予告をともなういずれかの動作パターンPTN1，2，4，5，7，8が選択された場合は、ST9が「YES」となってST10へと移行し、前記図6に示した乱数幅に基づく抽選が実行されて、M1～M3，R1～R3，L1～L3の中からいずれかの予告動作モードが選択される。またST11でダミーのリーチ予告を行うことが選択された場合も、ST10に移行して、M0，R0，L0の中からいずれかの予告動作モードが選択される。この後、CPU31は、各選択結果をRAM36内に記憶させ、一連の処理を終了する。なおこの時点でリール20a～20cが回転している場合は、保留ランプ17を1個点灯させることになる。

【0056】図8は、1個の入賞玉に対する制御の流れを示す。この制御ルーチンは、各リール20a～20cが回転していない状態下での割込み信号により開始されるもので、まずST21では入賞玉があるか否かがチェックされ、この判定が「YES」であれば、つぎのST22でリーチ予告を行うような動作パターンが選択されているか否かがチェックされる。

【0057】前記した図7のST3，ST8での各抽選により、PTN1，2，4，5，7，8，およびPTN10のうちのいずれかの動作パターンが選択されている場合、このST22は「YES」となり、CPU31は、つぎのST23で、図7のST10の選択結果に基づき、中央、右、左のいずれかのシンボル表示窓18c，18b，18a内のシンボルに予告フラッシュを施してから、各リール20a～20cを一斉に始動させる。さらにダミーのリーチ予告であるPTN10以外のパターンが選択されている場合は、所定時間が経過すると、ST25からST27へと移行して左右のリール20a，20bを順次停止させ、前記予告外のシンボルによるリーチを成立させる。

【0058】さらに所定時間が経過すると、CPU31は、ST28へと移行して左右のリール20a，20bの回転を再開する。この場合のリールの回転動作は前記図7のST10の選択結果に基づいて制御されるもので、各リール20a，20bは、齣送り、スロー回転、高速回転のいずれかの態様により回転して、複数種のシンボルによるリーチを変動させて表示させる。

【0059】この後、所定時間経過後に、CPU31は左右のリール20a，20bを再び停止させて、最終的なリーチを提示するが、PTN1，4，7のいずれかの制御パターンが選択されている場合は、予告されたシンボルが左右のシンボル表示窓18a，18b内に停止するようなリール停止制御が行われる（ST29，30）。これに対し、PTN2，5，8のいずれかの制御パターンが選択されている場合は、予告外のシンボルによるリーチが成立するように、各リールの停止動作が制御される（ST31）。

【0060】一方、リーチ予告を行わない制御モードPTN3，6，9のいずれかが選択されている場合は、前記ST22およびST25が「NO」、ST26が「YES」となる。CPU31は、ST22の判定を受けて各リール20a～20cをリーチ予告なしに始動させた後に、ST25，26の判定を受けて左、右の各リール20a，20bを順次停止させ、任意のシンボルによるリーチを成立させる（ST32）。

【0061】このようにしてリーチが成立すると、CPU31は、選択された動作モードに応じたリーチアクションを実行しつつ中央のリール20cを回転させ、しかる後にこのリール20cを所定のタイミングで停止させる。この場合、前記第1の抽選が大当たりになっていれば、ST33が「YES」となってST34に移行し、中央のシンボル表示窓18cにリーチを構成する左右のシンボルと同じシンボルが停止するように、リール20cの停止動作を制御する。

【0062】さらにこのシンボル停止により整列したシンボルが前記図7のST7で決められた大当たりシンボルとは異なる場合は、CPU31は、各リール20a～20cを再始動して、各シンボル表示窓18a～18cに決定された大当たりシンボルが移動するまで回転させる（ST35，36）。この後はST37へと移行して、特別入賞口15が開放される特別ゲームを実行する。

【0063】なおはずれリーチのシンボル組合せを成立させる場合は、ST33が「NO」となってST38へと移行し、CPU31は、中央のシンボル表示窓18c内に左右のシンボルとは異なるシンボルが表示されるタイミングでリール20cを停止させる。またダミーのリーチ予告を含むはずれのシンボル組合せを成立させる場合は、ST25，26がともに「NO」となってST39へと移行し、各リール20a～20cを左，右，中央の順に、それぞれ異なるシンボルが停止表示されるタイミングで停止させる。

【0064】こうして一連の制御手順が終了すると、最終のST40へと移行して、前記入賞玉数nがディクリメントされ、始動入賞口14への入賞玉1個分に対する処理を終了する。

【００６５】上記の制御によれば、各リール２０ａ～２０ｃが始動する前にリーチ予告が行われるので、遊技者は、リールの始動時点から入賞への期待感をもって各リール２０ａ～２０ｃの回転動作に注視するようになる。また予告されたシンボルによるリーチに対し、予告外のシンボルによるリーチよりも高い大当たり信頼度を持たせているので、遊技者は、リーチ予告が当たることに強い期待感を抱き、さらに予告されたシンボルによるリーチが出現すると、入賞に対しより一層の期待感を持って、中央のリール２０ｃの回転動作に注視するようになる。

【００６６】さらに上記の制御によれば、左右のリール２０ａ，２０ｂを一旦停止させて、予告外のシンボルによるリーチを出現させた後に各リール２０ａ，２０ｂを再回転させ、しかる後に最終的なリーチを出現させるので、最終的に予告されたリーチが出現した場合には、遊技者に、リールの再回転にともなって大当たり信頼度が上がったかのような印象を与えることができる。またリールの再回転時にはリーチ予告が当たるか否かは不明であるから、リールの再回転により、遊技者の予告されたシンボルによるリーチへの期待感をより一層高めることができる。

【００６７】さらにこの予告フラッシュやリールの再回転動作の態様によっても大当たり信頼度を変動させ、またリーチ成立後のリーチアクションの態様によっても大当たり信頼度が変動するので、リールの回転や停止がある都度、遊技者の期待感を高めたり、意外感を与えたりすることができ、興趣のあるゲームを展開することができる。

【００６８】なおこの実施例では、いずれか１つのシンボル表示窓内のシンボルに予告フラッシュを施すようにしているが、これに限らず、２個以上のシンボル表示窓内のシンボルに予告フラッシュを施して、フラッシュ表示されたいずれかのシンボルによるリーチが成立する可能性があることを示すようにしてもよい。また予告の方法は、フラッシュに限らず、例えばシンボル表示窓の窓枠内にＬＥＤを配置して、シンボルの周囲を囲むような照明を施すようにしてもよい。またリールに代えて、液晶パネルなどにより可変表示部を構成する場合は、予告対象のシンボルの色彩を変化させたり、特定のキャラクターや文字などを用いて予告対象のシンボルを識別表示するようにしてもよい。なおいずれの実施態様を実行する場合も、たまたま停止表示されているシンボルを識別表示することによりリーチ予告がなされるので、予告にかかる制御が簡単になる。またハード構成の面でも、シンボルを識別表示するための機構を設けるだけで良いので、装置構成を簡易化できる。

【００６９】またこの実施例では、リーチ予告を行う制御モードでは、いずれも左右のリールを一旦停止させてから再回転させるようにしているが、これに限らず、各リールの回転を１度きりにして、予告されたシンボルまたは予告外のシンボルのいずれかによるリーチを成立させるようにしても良く、また１度の回転で目的のリーチを出現させるモードと２段階のリーチを出現させるモードとを混在させて出現させてもよい。また最初の停止時に予告されたシンボルによるリーチを出現させた後に、リールの再回転により、最終段階では予告外のリーチを出現させるようなモードを設定してもよい。

【００７０】さらにリールの再回転後には、必ずしも先の仮停止時に出現したリーチとは異なる態様のリーチを成立させなければならないというものではなく、仮停止時と同様のリーチを出現させてもよい。また仮停止時には、リーチではなく、左右に異なるシンボルを停止させて、遊技者に「はずれ」の可能性を示唆しておき、リール２０ａ，２０ｂの再回転後にリーチを成立させるようにしてもよい。また前記したように、複数種のシンボルによるリーチ予告を行った場合は、各シンボルによるリーチを順番に出現させ、最終的にいずれかのシンボルによるリーチを成立させたり、または予告外のシンボルによるリーチに変動させるような制御も可能である。この場合、予告対象の各シンボルによるリーチにそれぞれ異なる大当たり信頼度をもたせるようにしておけば、遊技者はより信頼度の高いリーチの成立に期待しつつ、シンボルの変動表示により一層の注意を払うようになり、最終的にリールが停止するまでの間に遊技者の期待感を十二分に高めることができる。

【００７１】なおここでは、各シンボルの変動表示を任意のタイミングで停止させるパチンコ遊技機にこの発明を適用した例を示したが、これに限らず、遊技者の停止操作に応じて所定のシンボルを引き込んで変動表示を停止させるスロットマシンなどの遊技機にも、この種の機能を組み込むことが可能である。

【００７２】

【発明の効果】請求項１の発明では、遊技者に、所定の態様のリーチが出現することを予告するので、遊技者の入賞に対する期待感を早くから高めて、各可変表示部の変動表示およびその停止動作に注意を集中させることができる。また入賞決定用の抽選が当たっているときに、予告された態様のリーチが予告外の態様のリーチよりも高い確率で出現するように制御するので、予告された態様のリーチの成立によって、遊技者の入賞に対する期待感をますます高めることができる。

【００７３】請求項２の発明では、各可変表示部の変動表示が開始される前に停止表示されているシンボルを識別表示することにより、そのシンボルによるリーチが出現することを予告するので、遊技者の入賞への期待感を変動表示が開始された時点から高めることができる。しかも遊技者は識別表示されたシンボルにより予告内容を容易に理解でき、また予告にかかる装置構成や制御を簡易化できる。

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【0074】請求項3の発明では、予告の後に、少なくとも1個を除く各可変表示部のシンボルの変動表示が一旦停止した後に再変動し、最終的に停止したときに予告されたリーチまたはそのリーチ以外のシンボルの組合せを出現させるので、予告されたリーチの出現に対する遊技者の期待感を、シンボルの変動表示の開始、一旦停止、再開という段階を経て、徐々に高めることができ、興趣のあるゲームを展開することができる。

【図面の簡単な説明】

【図1】この発明の一実施例にかかるパチンコ遊技機の外観を示す正面図である。

【図2】盤面中央部の外観を示す正面図である。

【図3】シンボル照明用の光源の構成を示す一部を破断した正面図である。

【図4】パチンコ遊技機の電気構成を示すブロック図である。

【図5】シンボル変動表示動作のパターンをその動作内容等と対応づけて示す説明図である。

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【図6】リーチ予告用の予告動作モードをその動作内容等と対応づけて示す説明図である。

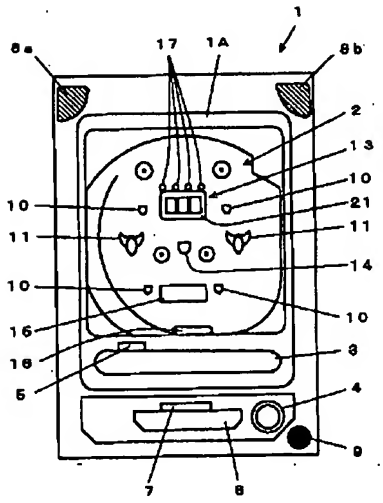
【図7】始動入賞口への入賞玉に対するシンボル表示の態様を決定するための制御手順を示すフローチャートである。

【図8】始動入賞口への入賞玉に対するシンボル表示制御を示すフローチャートである。

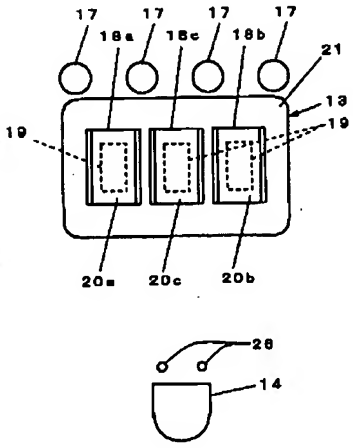
【符号の説明】

1　パチンコ遊技機
19　光源
13　シンボル可変表示装置
20a，20b，20c　リール
30　制御部
31　CPU
35　乱数抽選部

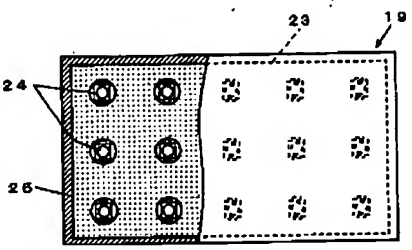
【図1】



【図2】



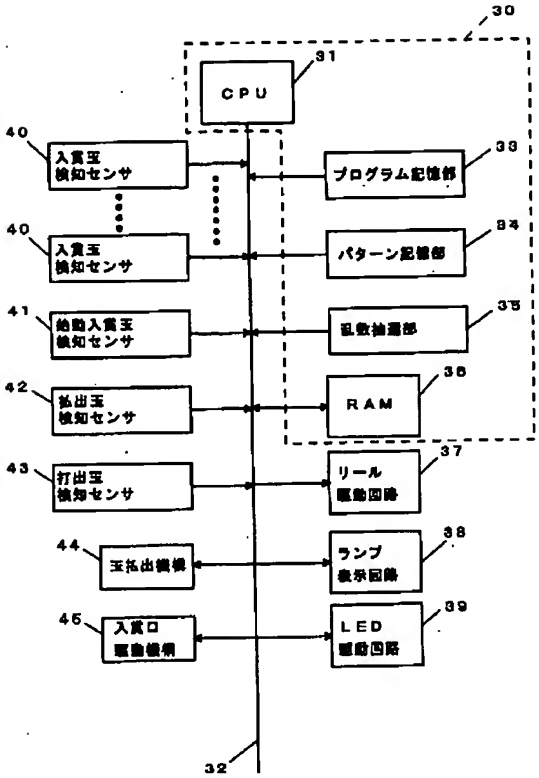
【図3】



【図5】

	動作内容	Ⓐ大当たり時乱数値	Ⓑはずれ時乱数値	Ⓒ大当たり信頼度(%)	リーチアクション
PTN1	予告あり→予告シンボルによるリーチ	30	1	50.0	モード1
PTN2	予告あり→予告外シンボルによるリーチ	10	2	14.3	
PTN3	予告なし→リーチ	10	7	4.5	
PTN4	予告あり→予告シンボルによるリーチ	18	3	16.7	モード2
PTN5	予告あり→予告外シンボルによるリーチ	6	6	3.2	
PTN6	予告なし→リーチ	6	21	0.9	
PTN7	予告あり→予告シンボルによるリーチ	12	6	6.3	モード3
PTN8	予告あり→予告外シンボルによるリーチ	4	12	1.1	
PTN9	予告なし→リーチ	4	42	0.3	
PTN10	予告あり→リーチなし（はずれ）			0	
PTN11	予告なし→リーチなし（はずれ）			0	

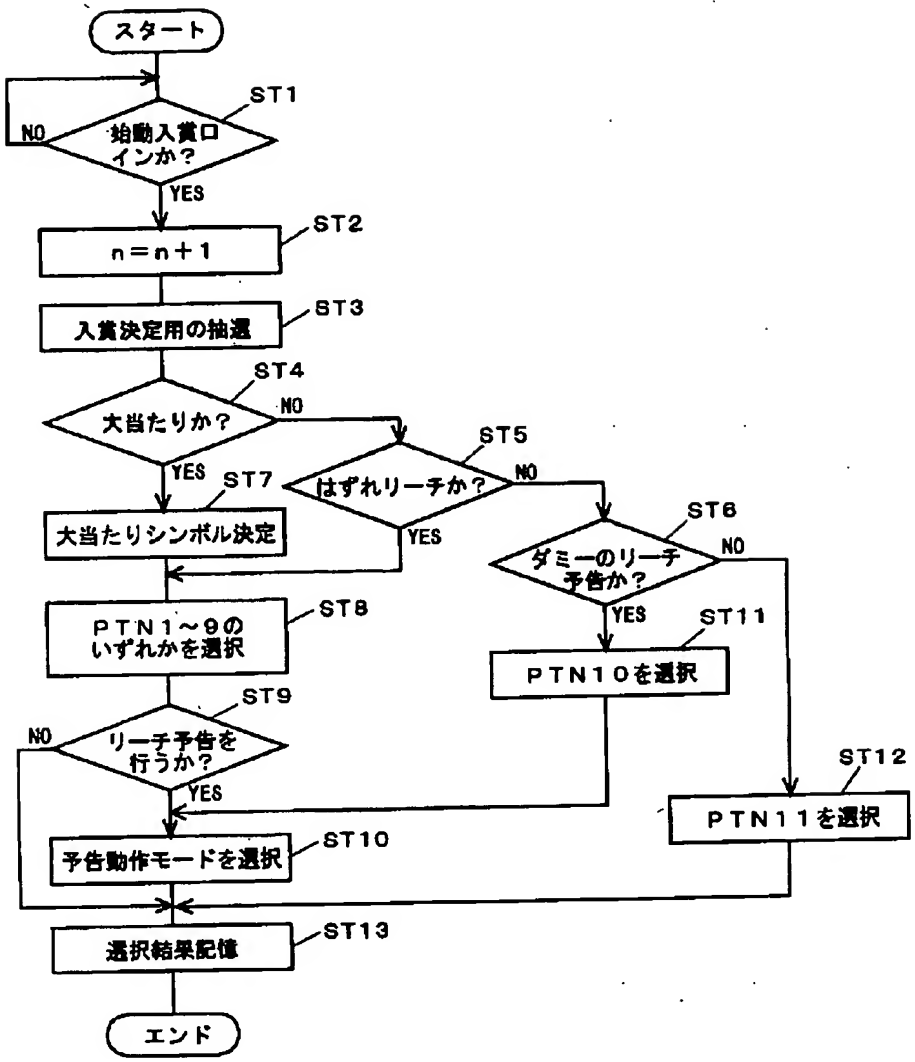
【図4】



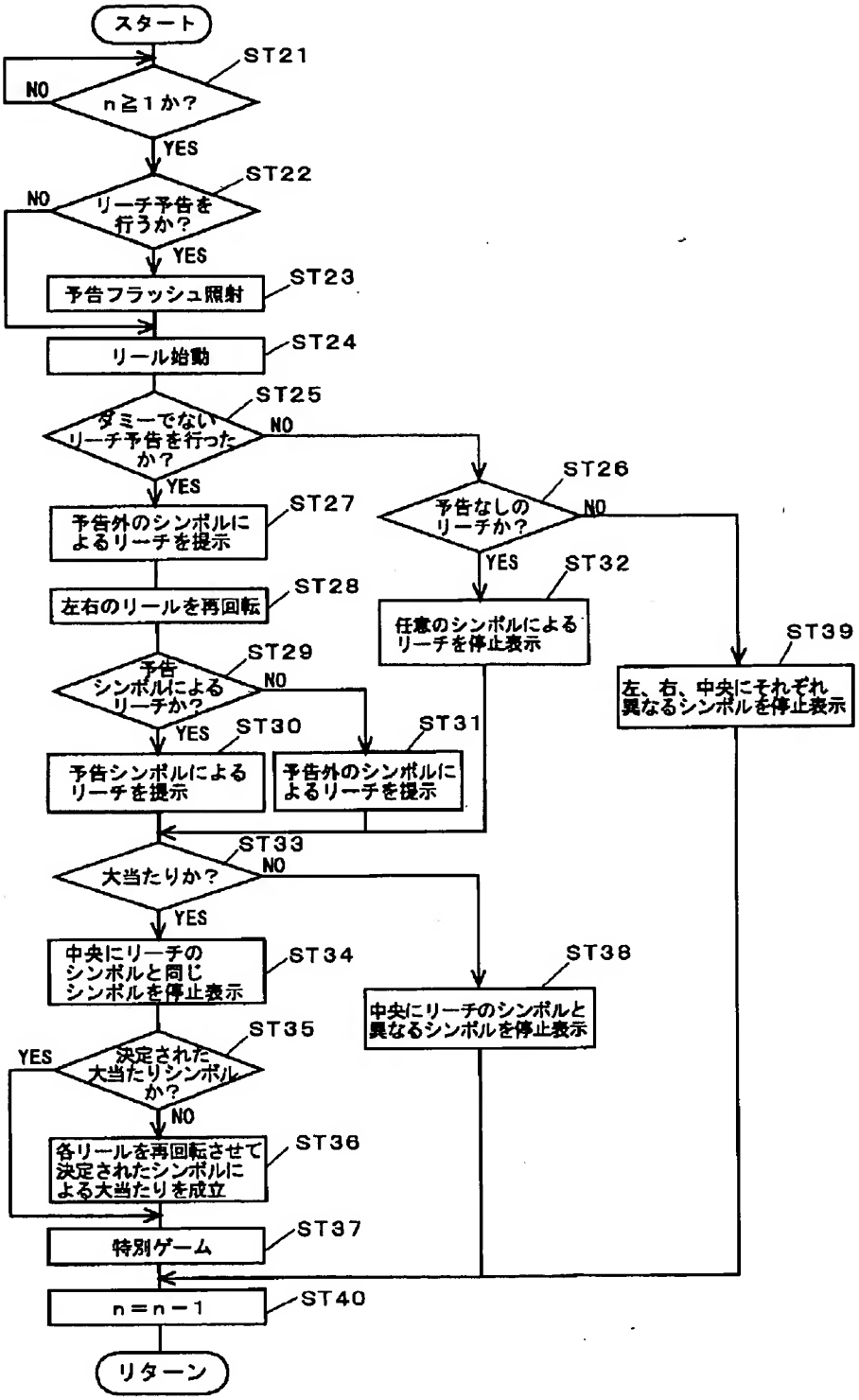
【図6】

	予告フラッシュの位置	再回転時のリール回転動作	乱数幅 (PTN1, 4, 7)	乱数幅 (PTN2, 5, 8)	PTN10
M1	中	肩透り	20	4	−
M2	中	スロー回転	12	6	−
M3	中	高速回転	8	10	−
R1	右	肩透り	15	6	−
R2	右	スロー回転	9	9	−
R3	右	高速回転	6	15	−
L1	左	肩透り	10	8	−
L2	左	スロー回転	6	12	−
L3	左	高速回転	4	20	−
M0	中	−	−	−	20
R0	右	−	−	−	30
L0	左	−	−	−	40

【図7】


スタート
ST1
始動入賞口インか？
NO
YES
ST2
n＝n＋1
ST3
入賞決定用の抽選
ST4
大当たりか？
NO
YES
ST5
はずれリーチか？
NO
YES
ST6
ダミーのリーチ予告か？
NO
YES
ST7
大当たりシンボル決定
ST8
PTN1～9のいずれかを選択
ST9
リーチ予告を行うか？
NO
YES
ST10
予告動作モードを選択
ST11
PTN10を選択
ST12
PTN11を選択
ST13
選択結果記憶
エンド

【図8】


スタート
ST21
n≧1か？
NO
YES
ST22
リーチ予告を行うか？
NO
YES
予告フラッシュ照射
ST23
リール始動
ST24
ST25
ダミーでないリーチ予告を行ったか？
NO
YES
予告外のシンボルによるリーチを提示
ST27
左右のリールを再回転
ST28
ST29
予告シンボルによるリーチか？
NO
YES
ST30
予告シンボルによるリーチを提示
ST31
予告外のシンボルによるリーチを提示
ST26
予告なしのリーチか？
NO
YES
ST32
任意のシンボルによるリーチを停止表示
ST39
左、右、中央にそれぞれ異なるシンボルを停止表示
ST33
大当たりか？
NO
YES
中央にリーチのシンボルと同じシンボルを停止表示
ST34
ST38
中央にリーチのシンボルと異なるシンボルを停止表示
ST35
決定された大当たりシンボルか？
YES
NO
各リールを再回転させて決定されたシンボルによる大当たりを成立
ST36
特別ゲーム
ST37
n＝n－1
ST40
リターン